STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Valerie Means	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE CERTIFICATE OF NEED AND ROUTE PERMIT APPLICATIONS FOR THE MINNESOTA ENERGY CONNECTION PROJECT	DOCKET NOS. E002/CN-22-131 AND TL-22-132
	RESPONSE TO HEARING COMMENTS

INTRODUCTION

Northern States Power Company, doing business as Xcel Energy (Company or Xcel Energy), respectfully submits these comments in response to the public hearing comments submitted for the Minnesota Energy Connection Project (Project). Xcel Energy appreciates the robust public involvement regarding this important Project, which is needed to interconnect new carbon-free generation to Xcel Energy's system to meet Minnesota's clean energy requirements, customer demands, and the Company's own carbon-free goals. The Administrative Law Judge and the Minnesota Public Utilities Commission now have the benefit of a robust record which, as described further herein, supports issuing a Certificate of Need for the Project and a Route Permit for Xcel Energy's Preferred Route.

RESPONSE TO HEARING COMMENTS

A. RESPONSE TO COMMENTS ON CERTIFICATE OF NEED.

1. The Project is needed to interconnect new carbon-free generation and reliably meet customer needs.

The Project is needed to interconnect new carbon-free generation (primarily wind generation) at the existing Sherburne County Generation Station (Sherco) Substation using Xcel Energy's existing and valuable interconnection rights associated with the Sherco coal units that are being retired. In its order regarding Xcel Energy's 2020-2034 Upper Midwest Integrated Resource Plan (IRP) (the 2019 IRP Order), the

Commission specified that the resources to be connected to the Project are needed to meet customer energy demand:

> Xcel has demonstrated that, between 2027 and 2032, it will need approximately 600 MW more solar-powered generation and 2,150 MW more wind-powered generation, or an equivalent amount of energy and capacity from a combination of wind, solar and/or storage.[1]

Further, consistent with the Settlement Agreement filed in Docket Nos. E002/RP-24-67 and E002/CN-23-212, the Company anticipates that the Project will interconnect 2,800 megawatts (MW) of wind, 120 MW of standalone storage, and the proposed 420 MW Lyon County Generating Station.[2] The Lyon County Generating Station will back up renewables and supply power during critical times, while also providing grid stability for the Project.

During the public hearings and in written comments, some commenters expressed opposition to the purpose of the Project, including opposition to renewable energy and concerns about ongoing reliability.[3] For example, members of the public questioned whether the Project would continue if federal policy regarding renewable energy changed. As discussed in the CN Application, the Project is needed to replace retiring generation at Sherco and to meet clean energy requirements in Minnesota and Xcel Energy's carbon free goals. Those needs have not changed. With respect to reliability, Xcel Energy's responsibility is to provide reliable service to its customers. To meet this responsibility, the Company engages in robust planning and analysis related to its system to ensure that it continues to provide reliable service. The Project will be an important part of that system, and reliability will be further supported by the proposed Lyon County Generating Station, as discussed above. This is consistent with the Department of Commerce, Division of Energy Resources' (DER) analysis, which concluded that denial of the Project would adversely affect the future adequacy,

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[1] *In the Matter of the 2020-2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy*, MPUC Docket No. E002/RP-19-368, Order Approving Plan with Modifications and Establishing Requirements for Future Filings, at Ordering ¶ 2.A.8 (Apr. 15, 2022); *see id.* at 14 ("Xcel has demonstrated that, between 2027 and 2032, it will need approximately 600 MW more solar-powered generation and 2,150 MW of wind-powered generation on the Sherco gen-tie line—or an equivalent amount of energy and capacity from a combination of wind, solar, and/or storage.).

[2] *In the Matter of Northern States Power Company d/b/a Xcel Energy 2024-2040 Integrated Resource Plan*, MPUC Docket No. E002/RP-24-67, Xcel Energy - Joint Settlement Agreement at 6 (Oct. 2, 2024).

[3] *See* Olivia 6:00 p.m. Public Hearing Transcript at 60:13-19 (Nov. 6, 2024); *see also* Comment by Kevin Maas (Nov. 26, 2024) (eDocket No. 202411-212462-03); Comment by Angela Sauer (Nov. 12, 2024) (eDocket No. 202411-211805-01).

reliability, and/or efficiency of energy support to the Company, its customers, and Minnesota.[4]

Some commenters also expressed concern about line losses from the Project.[5] Table 5.2 of the CN Application identifies line losses associated with the alternatives studied in the CN Application. As described in Chapter 5 of the CN Application, the Project as proposed minimizes line losses, taking into account the number of MWs needed to connect to the Project and other factors, including costs.[6]

Overall, the record—including the CN Application and DER analysis—demonstrates that the Project satisfies the criteria for a certificate of need.[7]

2. A more feasible and prudent alternative to the Project has not been demonstrated.

As part of its development of the Project, Xcel Energy conducted a detailed system alternatives[8] analysis. That analysis is reflected in Section 5 and Appendix G of the CN Application and demonstrates that there are no feasible and prudent alternatives to the Project for meeting the identified need to timely interconnect new carbon-free generation.[9] The Draft Environmental Impact Statement (DEIS) likewise includes an analysis of system alternatives, including: no-build, demand side management, purchased power, transmission lines of different size or type, upgrading existing facilities, generation rather than transmission, and use of renewable energy sources.[10]

During the public hearing comment period, members of the public submitted comments regarding various alternatives to the Project, including: coal or natural gas generation generally;[11] continuing to operate Sherco as a coal plant; converting Sherco

[4] DER Comments at 13 (Sept. 6, 2024) (eDocket No. 20249-210008-01).

[5] *See* Comment by John Stein (Nov. 12, 2024) (eDocket No. 202411-211805-01).

[6] CN Application at 64, 65, and 72.

[7] *See* DER Comments (May 19, 2022) (eDocket No. 20225-185893-01); DER Comments (May 23, 2022) (eDocket No. 20225-185973-01); DER Supplemental Comments (June 2, 2022) (eDocket No. 20226-186323-01); DER Comments (March 21, 2023) (eDocket No. 20233-194135-01); DER Supplemental Comments (April 17, 2023) (eDocket No. 20234-194831-01); DER Comments (Sept. 6, 2024) (eDocket No. 20249-210008-01); and DER Reply Comments (Oct. 8, 2024) (eDocket No. 202410-210797-01).

[8] A system alternative is an alternative to the Project itself (distinguished from a route alternative, which is an alternative location for some or all of the Project's route).

[9] CN Application at 71-77, Appendix G.

[10] Ex. EERA-12 at 59-64 (DEIS).

[11] *See* Kimball 6:00 p.m Public Hearing Transcript (Kimball 6:00 p.m. Tr.) at 111:10-23 (Oct. 30, 2024).

to natural gas;[12] nuclear power;[13] and siting renewable energy in closer proximity to Sherco.[14] None of these is an alternative to the Project:

- Coal or natural gas generation, generally: Neither coal nor natural gas would address the Project need to interconnect new carbon free generation to meet Minnesota requirements and Xcel Energy's carbon free goals.[15]

- Continued Sherco coal operations: In a separate proceeding, the Commission has already approved Xcel Energy's retirement of coal operations at Sherco. That decision is not being revisited in these proceedings.[16]

- Nuclear power: Xcel Energy is already operating two nuclear generating plants in Minnesota and Minnesota law prohibits new nuclear plants.[17]

- Siting renewable energy in closer proximity to Sherco: For wind generation, this is not an alternative to the Project because of land availability and low-quality wind resources closer to Sherco. For solar generation, Xcel Energy has already developed solar projects near Sherco to maximize renewable generation in close proximity.[18]

B. RESPONSE TO COMMENTS ON ROUTE PERMIT.

During the public hearing comment period, comments were submitted concerning the Project's routing generally, specific route alternatives, potential Project impacts, and potential avoidance measures or permit conditions. Xcel Energy responds to these comments in the sections that follow. In addition, some commenters expressed general opposition to the Project and/or the issuance of a route permit for the Project.[19] However, as discussed in Section B(1) below, the record demonstrates that a route

[12] *See* Kimball 6:00 p.m. Tr. at 62:16-22, 65:13-14 (Oct. 30, 2024); Comment by Betsy Nordgaard and Cody Buer (Oct. 21, 2024) (eDocket No. 202410-211141-01) and Comment by Daniel L. Winter (Nov. 21, 2024) (eDocket No. 202411-212262-07).

[13] Kimball 6:00 p.m. Tr. at 69:6-10 (Oct. 30, 2024).

[14] Redwood Falls 6:00 p.m. Public Hearing Transcript at 68:1-7, 68:15-20, 69:22-24, and 72:3-6 (Nov. 7, 2024).

[15] Ex. EERA-12 at 62-63 (DEIS).

[16] *In the Matter of the 2020–2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy*, MPUC Docket No. E002/RP-19-368, Order Approving Plan with Modifications and Establishing Requirements for Future Filings at 31 (April 15, 2022) (IRP Order).

[17] Ex. EERA-12 at 62 (DEIS).

[18] Xcel Energy Reply Comments - Response to Public Scoping Comments at 8-9 (Mar. 18, 2024) (eDocket No. 20243-204450-02).

[19] For example, more than 150 commenters submitted form "affidavits" that included opposition to the Project but did not identify specific properties of concern or routes.

permit should be issued for the Preferred Route because it meets the State's routing criteria and is the best route for the Project.

1. Xcel Energy's Preferred Route meets the State's routing criteria and best minimizes impacts to human settlement and the environment.

a. The Preferred Route.

Xcel Energy engaged in a rigorous route development process prior to filing the Application. Throughout this process, Xcel Energy has been independently analyzing the route and alignment alternatives, and public comments. As a result of that analysis, Xcel Energy identified its Preferred Route for the Project, which includes the Green Segment and the Blue Route, modified by the following route segment alternatives members of the public proposed during scoping: 202; 212; 216; 219; 226; and 244. The Preferred Route is approximately 178 miles long and within Sherburne, Stearns, Kandiyohi, Meeker, Renville, Redwood, and Lyon counties. Xcel Energy supports the Preferred Route because it minimizes human and environmental impacts, is feasible to construct, operate, and maintain, and presents engineering benefits.

The Blue Route was already the least impactful route across many resource categories. The inclusion of the six route segment alternatives results in further reducing impacts to the following resources:

- Native Plant Communities
- Sites of Biodiversity
- Forested upland
- Forested wetland
- MDNR Public Waters
- Improved crossing of Cottonwood River
- Agriculture

Likewise, the Preferred Route includes Xcel Energy's preferred crossing locations for the State-designated Wild and Scenic Mississippi, Minnesota and North Fork of the Crow Rivers.

Xcel Energy anticipates that the Preferred Route will have fewer structures and foundations, as well as approximately half the number of crossings of existing transmission lines of 115 kV or greater. This improves constructability and ongoing maintenance and reduces the potential for future outages due to maintenance of other

lines. Likewise, the Preferred Route does not follow railroad corridors, which negates the need for induction studies and mitigation, which can be time-consuming and costly.

b. Potential modifications to the Preferred Route.

As part of this permitting process, Xcel Energy continued to analyze route alternatives and alternative alignments and determined that it does not object to a modified version of Route Segment 223 or Route Segment 213 being selected as part of the final route to the extent the Commission determines that it is appropriate to do so.

(1) Modified Route Segment 223.

In Section 5.2.10.6.2, the DEIS notes that the Blue Route could impact the existing Lux Airstrip, a private grass airstrip, and states that "Route Segment 223 . . . is recommended to avoid direct impacts" to that airstrip. Likewise, written comments were submitted concerning Route Segment 223. As described in the Direct Testimony of Matthew Langan, Xcel Energy reviewed Route Segment 223 and does not support the entirety of that alternative because of increased impacts to residents on the southern portion of the alternative and constructability concerns associated with multiple potential crossings of an existing transmission line in this area. However, Xcel Energy does not oppose the northern approximately one mile of Route Segment 223. In Mr. Langan's Direct Testimony, Xcel Energy identified a modified version of Route Segment 223, along with the human and environmental impacts associated with the modified route segment. Xcel Energy does not object to the modified alternative being included in the Project's route.

(2) Route Segment 213.

Section 7.9.5 of the DEIS discusses Route Segment 213 and states that the alternative was proposed, among other things, to avoid nearby dwellings. Oral and written comments were also provided concerning Route Segment 213. Xcel Energy's initial review of Route Segment 213 identified several issues related to this alternative, including the close proximity to the Minnesota Department of Natural Resources Sheridan Wildlife Management Area (WMA) and state conservation easements along the Redwood River, a greenfield crossing of the Redwood River, additional wetland crossings, and three additional angle structures that increase cost. Route Segment 213 does, however, provide a net reduction of four residences within 300 feet of the transmission line. Therefore, upon further analysis, including review of comments made during the public hearings, Xcel Energy has determined that, although there would be an increase in cost, Route Segment 213 would be feasible because the Project alignment could avoid the WMA and conservation easements. Xcel Energy does not

object to the extent the Commission selects Route Segment 213 as part of the Project's route.

2. Response to agency comments.

a. Minnesota Department of Natural Resources.

In its November 25, 2024, comments, the Minnesota Department of Natural Resources (MDNR) identified its route preferences, by region, described its position regarding the Project's crossing of the Mississippi River, and discussed potential mitigation measures and route permit conditions.[20]

(1) Routing preferences.

As an initial matter, it is important to recognize that Xcel Energy developed the Blue and Purple Routes, as well as the Preferred Route, to avoid all MDNR lands, consistent with input provided by MDNR during the route development process. As discussed in Section B(1) above, Xcel Energy believes that the Preferred Route (with or without Route Segments 213 and 223) appropriately minimizes and balances impacts to both human and environmental features. In contrast, MDNR's routing preferences increase impacts on human settlement in some instances. Because Minnesota's routing criteria require consideration and balancing of both human and environmental features, Xcel Energy continues to believe that the Preferred Route is the best route for the Project.

For reference and comparison, Table 1 below summarizes MDNR's and Xcel Energy's route preferences by region using the DEIS route naming terminology. Xcel Energy's more detailed responses regarding MDNR's route preferences are included in the sections that follow.

[20] MDNR DEIS Comments (Nov. 26, 2024) (eDocket No. 202411-212410-01, 202411-212410-02, and 202411-212410-03) (MDNR DEIS Comments).

Table 1

Region	MDNR Route Preference	Xcel Energy Preferred Route
A	A6 (Blue)	A6 (Blue)
B	B4 + 211, 214 (Blue)	B4 + 212 + 216 + 219 (Blue)
C	C4 + 223 (Blue)	C4 (Blue)
	105 (Connector B) (Purple)	
D	D1 (Purple)	D5 (Blue)
E	E1 (Purple)	E2 (Blue)
F	F1+ 109 or 110 (Purple)	F4 (Blue)
G	G1 and G4 + (237, 238, 240, 249, or 250+114) + G4 (247 or 248) (Blue to Purple) *OR* G3 + G5 (241) + G4 (247 or 248) (Purple)	G1 + 244 (Blue)

(a) Region A.

In Region A, MDNR prefers the Blue Route with Route Segment 202, stating that it would "reduce impacts to the Cottonwood River and rare resources." The Blue Route + Route Segment 202 in Region A equates to Route A6, which is also part of Xcel Energy's Preferred Route in Region A. Xcel Energy agrees that the Blue Route with Route Segment 202 (Route A6) is the best route in Region A.

(b) Region B.

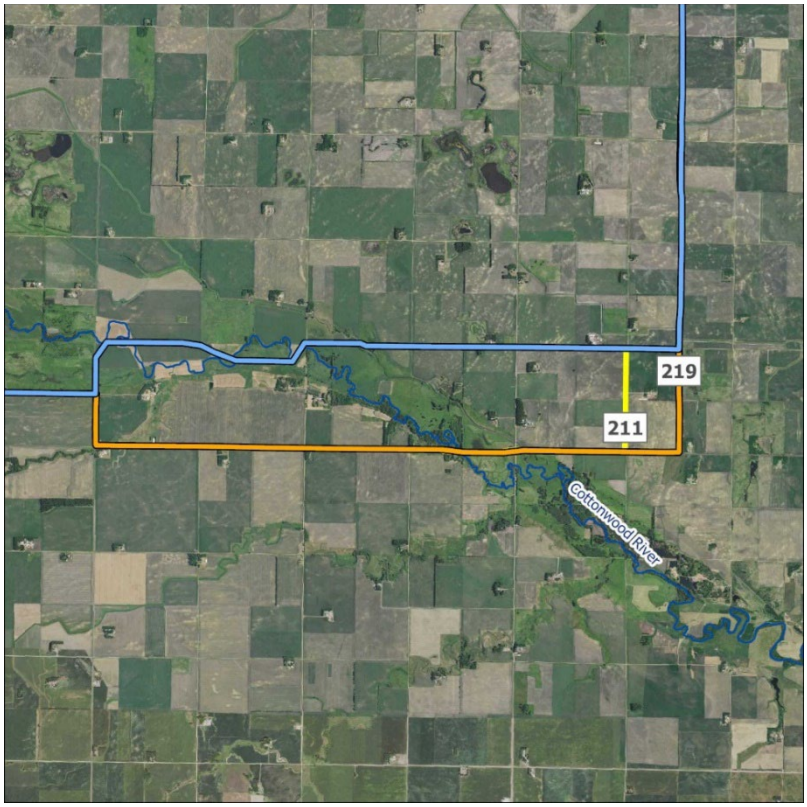
In Region B, MDNR prefers the Blue Route (B4) with Route Segments 211 and 214, stating that it would "reduce impacts to the Cottonwood River, Wabasha Creek, conservation land, and rare resources." Xcel Energy also prefers the Blue Route (B4) in Region B, but does not agree that Route Segments 211 and 214 are preferable.

Route Segment 211 is a sub-part of Route Segment 219, which Xcel Energy incorporated into the Preferred Route. Xcel Energy prefers Route Segment 219 over Route Segment 211 because Route Segment 219 would require two additional two-pole angle structures, with associated costs and impacts.[21] Figure

[21] Ex. Xcel-19, Schedule 2 at 5 (Surrebuttal Testimony and Schedules of Matthew Langan (Langan Surrebuttal)).

1 below shows Route Segment 211 in yellow and Route Segment 219 in orange for reference.

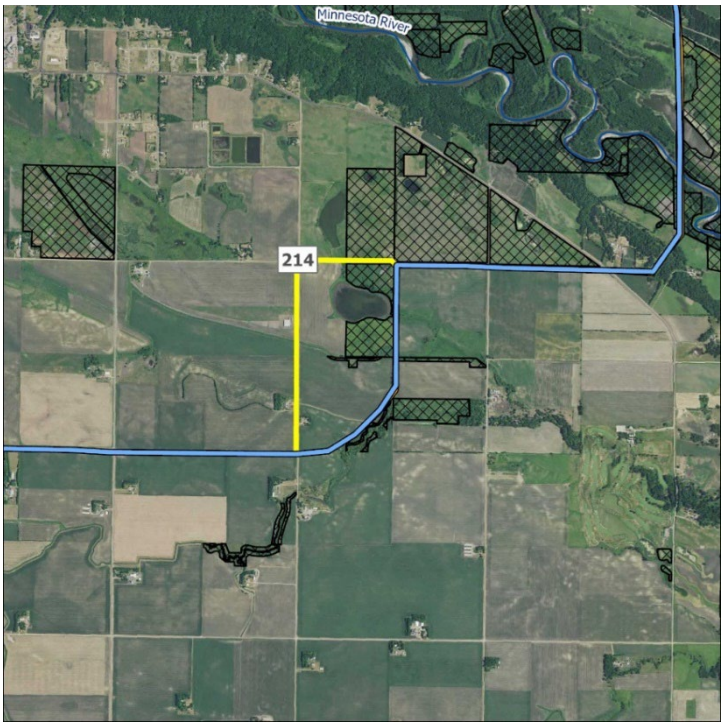
Figure 1



Route Segment 214 would require the installation of structures within a Board of Water and Soil Resources (BWSR) easement, which would likely require termination or alteration of the BWSR easement,[22] as shown in Figure 2 below.

[22] Ex. Xcel-19, Schedule 2 at 6 (Langan Surrebuttal).

Figure 2

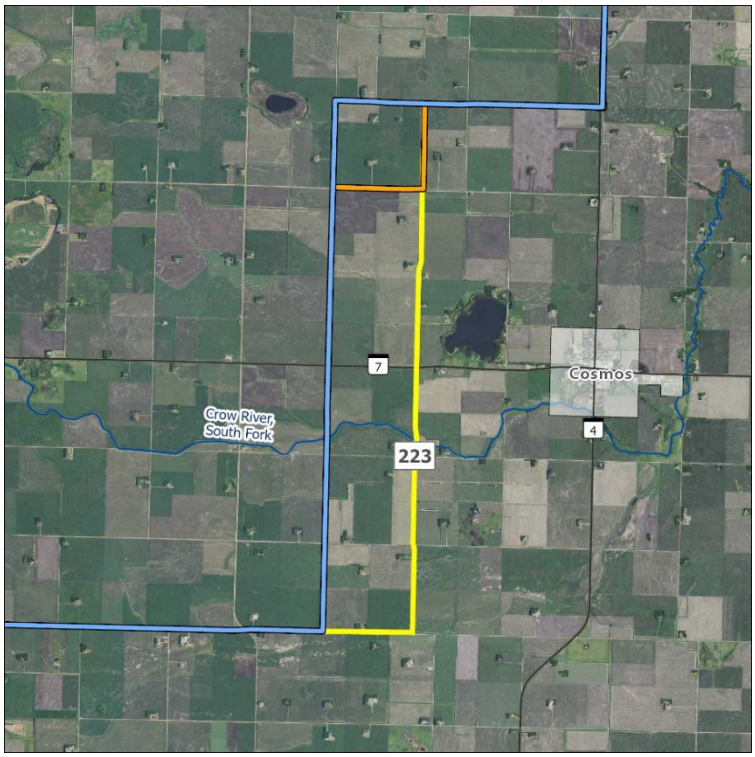


(c) Region C.

In Region C, MDNR prefers the Blue Route (C4) with Route Segment 223 to "follow[] an existing line and potentially minimize[e] impacts to rare resources." MDNR then prefers to connect to the Purple Route via Connector B (Route Segment 105) "to reduce impacts to conservation land and Horseshoe Lake, potentially reducing bird impacts."

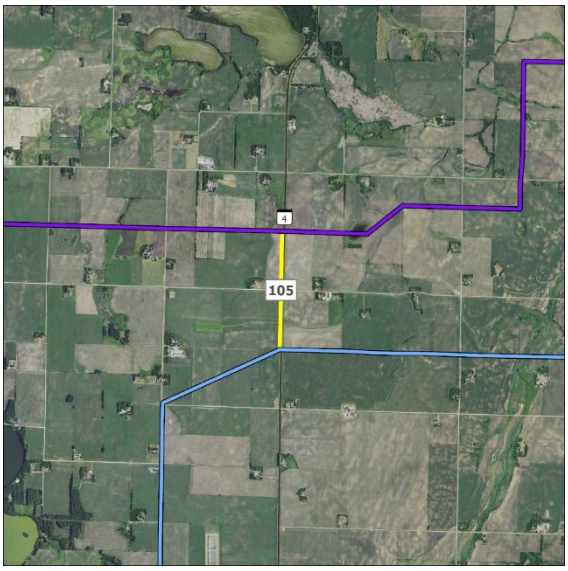
> Route Segment 223 would be in closer proximity to residences and presents constructability and reliability issues related to multiple crossings of the existing 69 kV line in the area. However, as described above, Xcel Energy does not object to the northern approximately one mile of Route Segment 223 to avoid potential impacts to the Lux Airstrip. Figure 3 below depicts Route Segment 223 in yellow, and the modified Route Segment 223 in orange.

Figure 3



Connector B (Route Segment 105) connects the Blue and Purple Routes in Meeker County, as shown in Figure 4 below. Xcel Energy does not support transferring to the Purple Route in this area for the reasons discussed in the following section.

Figure 4



(d) Region D.

In Region D, MDNR prefers the Purple Route (D1). MDNR did not provide a rationale for its preference in this region. Xcel Energy supports a modified Blue Route (D5) in Region D because, as compared to the Purple Route (D1), the route would have less wetland impacts, eliminate one residence within 150 feet, and have five fewer angle structures with associated costs and impacts. Additionally, the Preferred/Blue Route includes Xcel Energy's preferred crossing location of the North Fork of the Crow River along State Highway 22. Both the Purple and Blue/Preferred Routes cross this river, but the Blue/Preferred Route does so in a less impactful location because the Blue/Preferred Route crosses the North Fork of the Crow River along a state highway (Highway 22), whereas the Purple Route's crossing is along a local unpaved road.

(e) Region E.

In Region E, MDNR prefers the Purple Route (E1) to "avoid Clear Lake potentially reducing bird impacts." More generally, Xcel Energy supports the Blue Route (E2) in Region E because, as compared to the Purple Route (E1), it is farther away from communities, specifically Eden Valley. Additionally, the Purple Route follows the Soo Line Railroad for approximately 2.5 miles, which could require induction studies and costly mitigation measures. Regarding potential avian impacts near Clear Lake, Xcel Energy notes that closest the Blue Route alignment comes to Clear Lake is approximately 0.6 miles away, and Xcel Energy would agree to additional mitigation measures such as installing bird flight diverters in this area to further reduce the potential for impacts on birds.

MDNR also requests that alignment adjustments be made to avoid vegetation removal within the Alice Hamm WMA on Route E1. Xcel Energy has reviewed the location of this route with respect to the WMA; to the extent the Commission selects Route E1 as part of the Project's route, vegetation removal would not be required within the WMA.

(f) Region F.

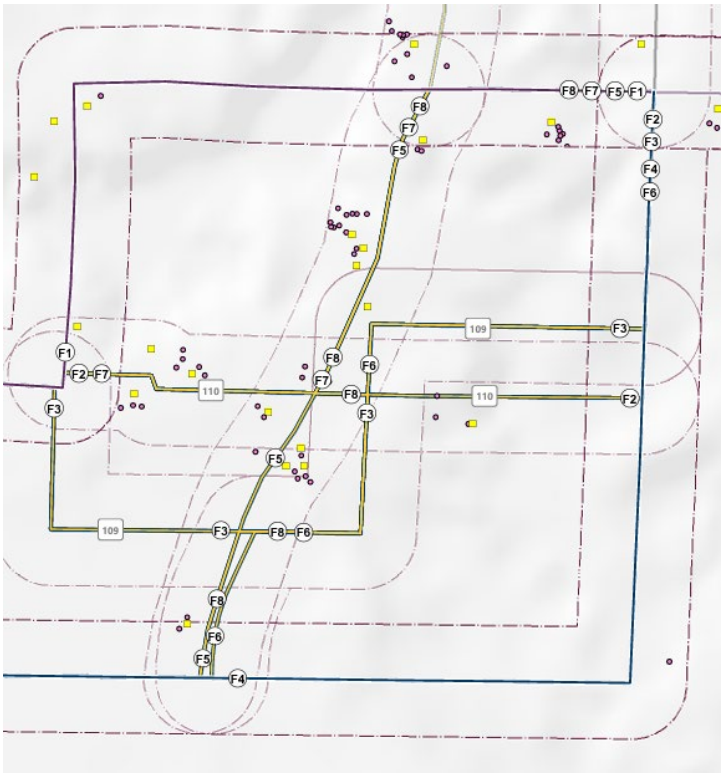
In Region F, MDNR states that it "prefers Route Connectors 109 or 110 to avoid crossing public waters and potentially reducing bird impacts." Route Segments 109 and 110 are both modifications to the Purple Route (F1) in Region F that connect the Purple Route to the Blue Route. If the Blue Route (F4) is selected in this region, Route Segments 109 and 110 are not applicable. More generally, Xcel Energy supports the Blue Route (F4) in Region F because, as compared to the Purple Route (F1), it has eight fewer residences within 500 feet (10 versus two residences) and fewer wetland

impacts.[23] However, to the extent the Commission selects Route F1 as part of the Project's route, Xcel Energy does not support Route Segments 109 and 110.

Route Segment 109 crosses an active gravel pit and would require potentially six additional angle structures.

Route Segment 110 would result in increased impacts to residences and clearing of forested wetlands.[24]

Figure 5



(g) Region G.

First, in Region G, MDNR prefers the Blue Route (G1) in the western portion of the route, modified by "Route Segments 237, 238, 240, 249, or 250", followed by Route Segment 114 that connects to the Purple Route (G3) at Highway 45. MDNR states that this "avoids rare resources and a designated trout stream." Xcel Energy generally supports the Blue Route (G1) in Region G, but does not support Route Segments 237, 238, 240, 249, 250, or 114.

[23] *See* Ex. EERA-12 at 385 and Appx. E (DEIS).

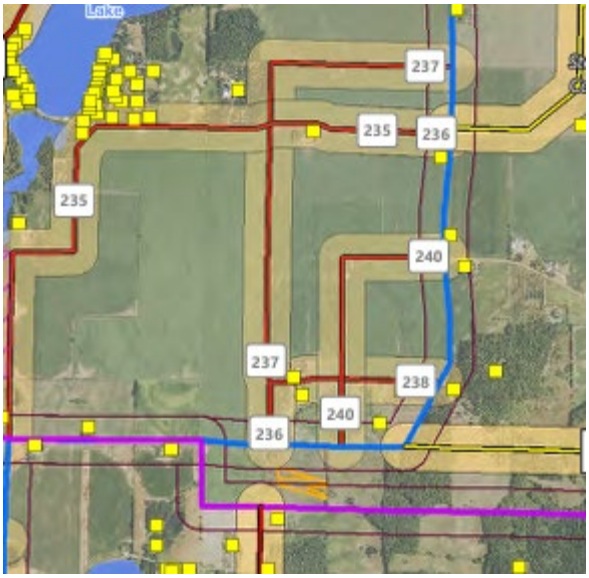
[24] *See* Ex. EERA-12 at 385 (DEIS). Route Connector 110 is part of Route F2. *See id.* at 366.

Route Segment 237 increases the potential impacts to center pivot irrigation systems in this area.

Route Segment 238 increases impacts to residences in this area, and there is a lack of available right-of-way due to residences on both sides of the road.

Route Segment 240 increases the potential impacts to center pivot irrigation systems in this area.

Figure 6

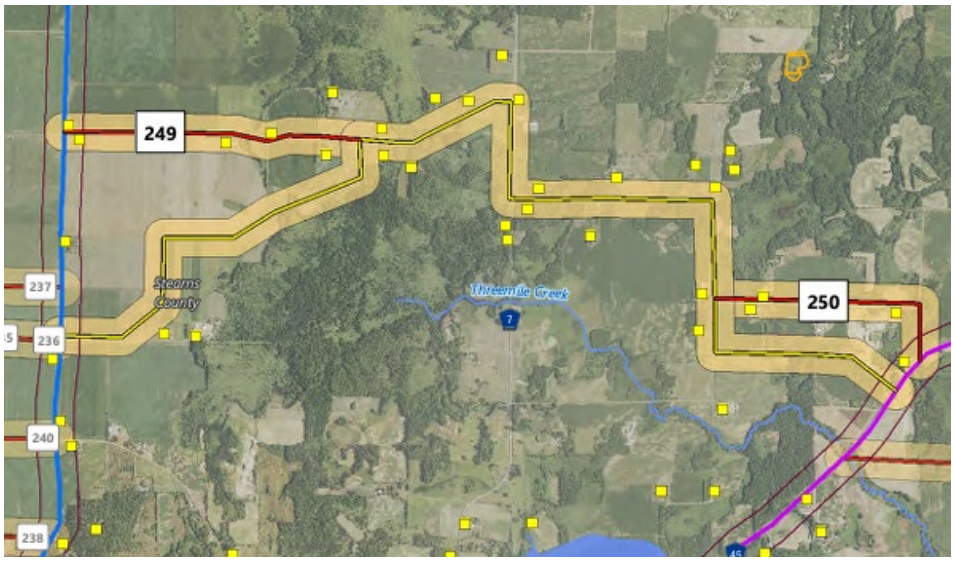


Route Segment 249 is a variation on Route Connector 114/115 (Route Connector 114 incorporates Route Segment 250) and increases the potential impacts to center pivot irrigation systems in this area. This segment also increases impacts to residences in this area, and there is a lack of available right-of-way due to residences on both sides of the road.

Route Segment 250 is a variation on Route Connector 114/115 increases impacts to residences in this area, and there is a lack of available right-of-way due to residences on both sides of the road.

Route Segment 114 increases the potential impacts to center pivot irrigation systems in this area.

Figure 7



Alternatively, second, MDNR states that it supports the Purple Route (G3) "east of School Section Lake only in combination with Route Segment 241 . . . [to] avoid impact to Fairhaven Creek, a designated trout stream." Xcel Energy does not support the Purple Route (G3) in this region for the reasons discussed in subsection (h) below. To the extent the Commission selects Route G3, Xcel Energy also does not support Route Segment 241.

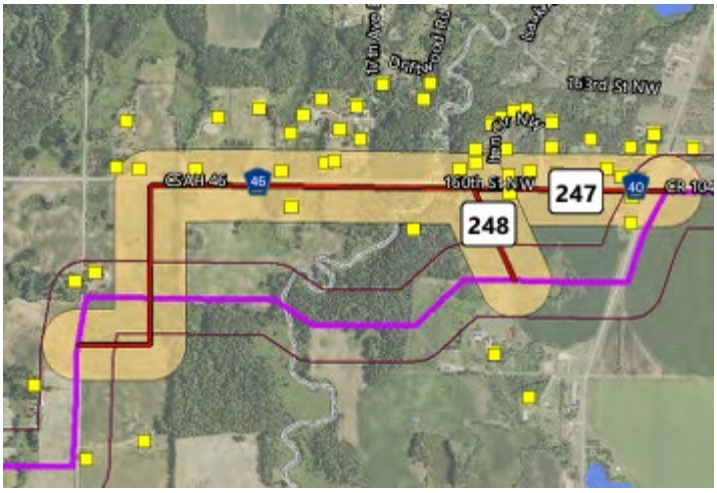
> Route Segment 241 would increase the route length and add eight additional structures. It would also be located in closer proximity to more residences. Further, Route Segment 241 also crosses Fairhaven Creek.

Figure 8

Third, MDNR states that it prefers Route Segments 247 or 248 "to avoid new [right-of-way] over the Clearwater River."

Route Segment 247 and Route Segment 248 would both greatly increase residential impacts, as compared to the corresponding portion of the Purple Route. Specifically along Route Segment 247, there are residential constraints along 160th Street where right-of-way is not available.

Figure 9



(h) Mississippi River crossing.

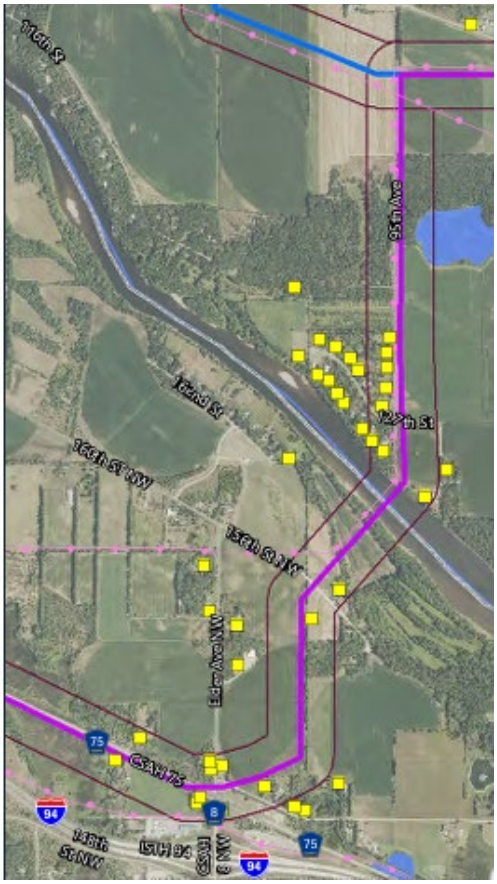
MDNR states that it "strongly prefers a route that utilizes existing crossings over the Mississippi River," which would include the Purple Route or Route Segment 246.[25] With respect to the Project's crossing of the Mississippi River, Xcel Energy recognizes that utilizing existing crossings is generally preferred because doing so often avoids/minimizes potential aesthetic, vegetation, and other impacts. However, in these specific circumstances, Xcel Energy does not support the Purple Route's crossing of the Mississippi River (G3), nor does Xcel Energy support Route Segment 246 because both routes substantially increase impacts on human settlement.[26]

Route G3 (Purple Route) would follow existing infrastructure at the river crossing, but would result in residential impacts south and west of Sherco. Specifically, the residences along 95th Avenue, north of the river crossing. In contrast, the Preferred Route's crossing of the Mississippi River would be adjacent to undeveloped land and would cross at a narrow river channel. As compared to other potential crossings, this crossing also minimizes impacts to residences. Route G3 (Purple Route) would also require crossing an existing transmission line at this river crossing location, as compared to zero line

[25] MDNR DEIS Comments at 2.
[26] Ex. Xcel-16 at 14-15 (Direct Testimony and Schedules of Matthew Langan (Langan Direct)).

crossings for the Preferred Route. Reliability issues associated with line crossings are discussed further in Section B(4)(h) below.

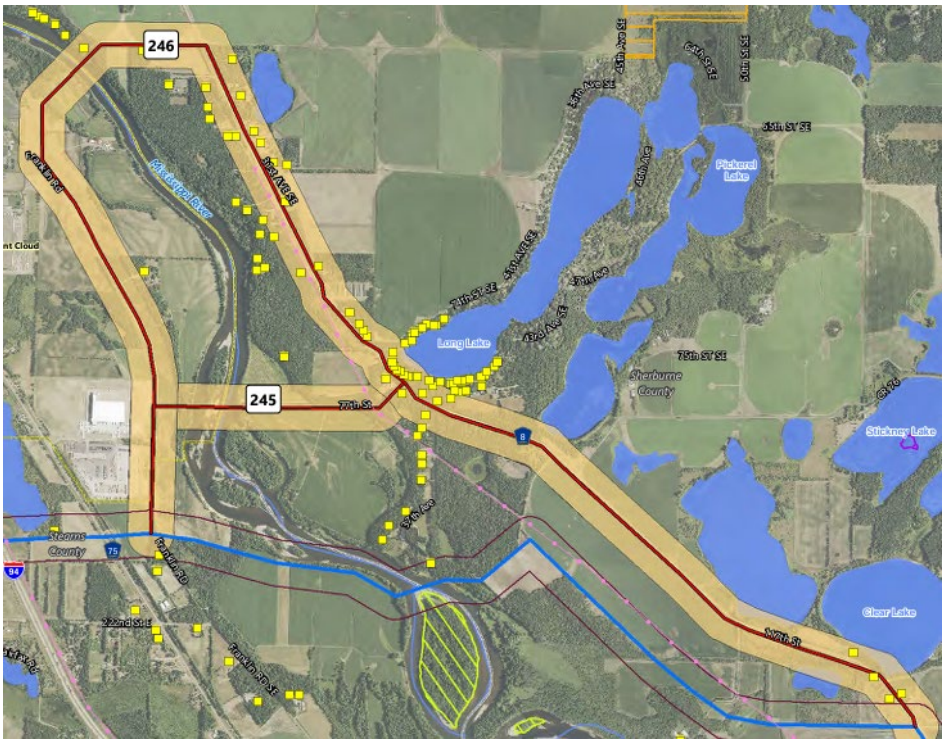
Figure 10



Route Segment 246 is an alternative crossing of the Mississippi River on the Blue Route. The route would increase impacts on residences because there is not sufficient right-of-way along River Road in this area. Specifically, there would be 42 residences within 500 feet of this route (shown in yellow boxes on Figure 11 below), as compared to two residences within the corresponding section of the Preferred Route. Route Segment 246 is also approximately 3.4 miles longer than the Preferred Route, with a corresponding increase in costs and impacts. Although Route Segment 246 would cross the Mississippi River with existing infrastructure (a 115 kV line), the crossing increases human and environmental impacts and is not supported by Xcel Energy.[27]

[27] Ex. Xcel-16 at 14-15 (Langan Direct).

Figure 11



MDNR further states that it "generally prefers utilizing pole structures for the Mississippi River crossing that place transmission lines side by side rather than stacked because it creates fewer vertical planes for bird impacts."[28] A horizontal configuration at the Mississippi River crossing would require a 250-foot right-of-way because the lower height of the horizontal configuration requires the use of additional structures. Xcel Energy will use a horizontal configuration for the Mississippi River crossing, particularly given that the Preferred Route is not an existing crossing. Xcel Energy requests that any route permit issued by the Commission acknowledge the potential for a widened right-of-way at this location.

(i) Comparison of MDNR route preferences with Xcel Energy Preferred Route.

Table 2 provides a comparison of Xcel Energy's Preferred Route, MDNR's route preferences, and the Blue and Purple Routes using some routing factors for which there are, in Xcel Energy's view, more material differences among the routes. Note that MDNR's comments identified multiple potential route segments in some regions. Xcel Energy has addressed each of these route segments in the sections above/elsewhere. However, to allow for some comparison among MDNR's route preferences, Xcel Energy's Preferred Route, and the Blue and Purple Routes, the

[28] MDNR DEIS Comments at 2.

MDNR route presented in Table 2 below includes the following route segments: Route A6; Route B4 with Route Segments 211 and 214; Route C4 with Route Segment 223 and Route Connector 105; Route D1; Route E1; Route F1 with Route Connector 110; Route G1 with Route Segments 240, 249, and 115; and G3 with Route Segment 248. Where MDNR indicated a preference for overlapping route segments, the route above includes the segment that (at least in Xcel Energy's view) is least impactful in comparison to the other MDNR route segment preferences in the same area. Selecting a different combination of MDNR's preferred route segments in areas where they overlap would result in different calculations.

Table 2

	Xcel Energy Preferred Route	**MDNR Route**	**Blue Route**	**Purple Route**
Mileage[29]	175	175	174	171
Residences 0-75 feet	0	0	0	0
Residences 76-150 feet	16	13	16	19
Residences 151-300 feet	72	82	72	72
Residences 301-500 feet	58	77	57	68
Total residences 0-500 feet	146	172	145	159
BWSR easements crossed by right-of-way (number)	6	8	6	7
NWI wetlands within right-of-way (acres)	138	145	152	135
Following existing right-of-way, parcel, section, division lines (percent)[30]	91	91	89	89
Crossings of existing transmission lines 115-kV or greater (number)	12	12	12	23
Estimated cost[31] (rounded to nearest million)	$773 million	$802 million	$767 million	$787 million

[29] Does not include Green Segment.

[30] The values in this row reflect the values from the RP Application and do not include the green segment.

[31] The cost figures in Table 2 differ from the values in the DEIS; as described in the Surrebuttal Testimony of Joseph Samuel, the DEIS values appear to be based solely on a cost per mile. However, the DEIS values do not appear to account for the additional variables that impact the cost of a route, although Xcel Energy conducted this analysis. Further, Xcel Energy has since updated the estimated cost per mile for the Project. The values above do not reflect those updates, but Xcel Energy anticipates that the cost update would affect the route alternatives by generally the same magnitude. *See* Ex. Xcel-20 at 4-6 and Schedule 1 (Surrebuttal Testimony and Schedule of Joseph Samuel).

(2) Impact mitigation and permit conditions.

MDNR also discusses potential mitigation measures and permit conditions, each of which Xcel Energy addresses below.

Floodplains: MDNR states that vegetation clearing within a floodplain can result in erosion and sediment issues, among others. MDNR does not identify a minimization measure with respect to this issue. However, as described in the RP Application, the Project will be designed to span waterbodies and floodplains where practicable and to minimize the number of structures in surface water resources where the resources cannot be spanned. Substations will not be sited within floodplains.[32]

Winter tree clearing: MDNR requests that the Final EIS and route permit require Xcel Energy to conduct winter tree clearing to minimize impacts to nesting birds and roosting bats. Xcel Energy will comply with applicable state and federal requirements regarding vegetation clearing. Because those requirements can already be restrictive and pose schedule uncertainty, Xcel Energy does not believe restrictions beyond those already present in state and federal requirements are appropriate or needed.[33]

Designated trout streams: MDNR states that it does not support creating new right-of-way over designated trout streams or their headwaters. Xcel Energy's Preferred Route crosses only one designated trout stream (Johnson Creek) at an existing bridge crossing along County Road 7. Xcel Energy will continue coordination with MDNR regarding this resource after a route is selected.[34]

Water appropriation: MDNR notes that a water appropriation permit is required for certain construction activities. Xcel Energy is aware of this potential requirement and will apply for a permit, as needed.

Natural Heritage Review: MDNR states that the final route selected by the Commission will require an updated Natural Heritage Review letter. Xcel Energy will submit the final route selected by the Commission for review. MDNR then highlights certain resources identified by the Natural Heritage Review for the Blue and Purple Routes: Henslow's sparrows (Blue); calcareous fen (Purple); Blanding's Turtle (Purple). Xcel Energy will continue coordination with MDNR regarding these resources after a route is selected and will comply with applicable regulations for construction of the Project.

[32] Ex. Xcel-2 at 170 (RP Application).
[33] MDNR DEIS Comments at 3; Ex. Xcel-2 at 192 and 200 (RP Application).
[34] Ex. Xcel-16, Schedule 4, Impact Table (Langan Direct).

Coordination with U.S. Fish and Wildlife Service (USFWS): MDNR recommends that coordination with USFWS be included as a route permit condition. Xcel Energy has been engaged with USFWS and will continue to do so as required by the U.S. Army Corps of Engineers (USACE) permitting process. Because this coordination is already part of the federal permitting process overseen by USACE, Xcel Energy submits that a separate permit condition is not needed here.

Finally, MDNR recommends special permit conditions related to facility lighting, dust control, wildlife-friendly erosion control, and coordination regarding avian flight diverters. These recommendations are substantially similar to other recent route permit conditions, and Xcel Energy does not object to these recommendations.

b. Minnesota Department of Transportation.

In its November 25, 2024, comments, the Minnesota Department of Transportation (MnDOT) provides comments concerning Section 5.2.10 of the DEIS, as well as comments concerning route alternatives in relation to resources within MnDOT right-of-way.[35] With respect to Section 5.2.10 of the DEIS, MnDOT identifies potential impacts which it states should be considered in the DEIS, particularly for "paralleling within any road [right-of-way]." The potential impacts MnDOT identified can be avoided or minimized through coordination and prudent routing and design, and state statute contemplates that these uses may co-exist.[36] In this section, MnDOT also requests edits within Section 5.2.10.6.2 of the DEIS; Xcel Energy does not object to these revisions.

MnDOT's comments concerning route alternatives generally relate to resources (cultural resources, contaminated materials, and protected species) within MnDOT right-of-way. To the extent the final Project route would impact any of these resources within MnDOT right-of-way, Xcel Energy understand that further review/coordination with MnDOT may be needed.

3. Route- and/or area-specific comments.

The sections below discuss specific route segments or areas which were the subject of multiple public comments, to the extent those segments or areas are not already addressed elsewhere in these comments.

[35] MnDOT DEIS Comments at 1 (Nov. 25, 2024) (eDocket No. 202411-212360-01).
[36] *E.g.*, Minn. Stat. 161.45.

a. Route A6 (Route 202)

Several comments were submitted regarding Route A6 (which includes route 202 and is part of Xcel Energy's Preferred Route). Xcel Energy incorporated route 202 into the Preferred Route because it follows a County Road 9 versus property lines, and crosses the Cottonwood River at an existing bridge crossing versus creating a new corridor; therefore, Xcel Energy continues to believe that route 202 is appropriate for inclusion in the Project's route. One commenter indicated that cultural resources may be present on her parcel;[37] but as described in Section 4(d) below, Xcel Energy is implementing a survey strategy for the Project before construction commences.

b. Route Segment 209

Comments were submitted regarding Route Segment 209 expressing concern about the residential impacts of that route.[38] Route Segment 209 is a variation on the Purple Route in Region B (Route B3). Xcel Energy also does not support Route Segment 209 because it is a longer route and has additional residential impacts are compared to the Purple Route; further, this route segment is not applicable to the Preferred Route in this region.[39]

c. Route Segment 213

Several commenters submitted comments in support of Route Segment 213, noting the reduction in residences along that route. As discussed in Section B(1)(b)(2) above, Xcel Energy agrees that Route Segment 213 would provide a net reduction of four residences within 300 feet of the transmission line. However, there would be an increase in cost because of additional angle structures. Xcel Energy does not object to the extent the Commission selects Route Segment 213 as part of the Project's route.

d. Route Segments 236, 237, 238, 239, and 240

One commenter, Jason Pierskalla, submitted several route alternatives (Route Segments 236 through 240) during scoping and continued to advocate for these alternatives during the public hearing period. The route alternatives were proposed to reduce impacts to Mr. Pierskalla's residence and/or property. MDNR would also incorporate Route Segments 237, 238, or 240 in Region G, as discussed in Section B(2)(a) above. Figures excerpted from the DEIS showing residences and center pivot irrigation in the vicinity of these route segments are provided below for reference.

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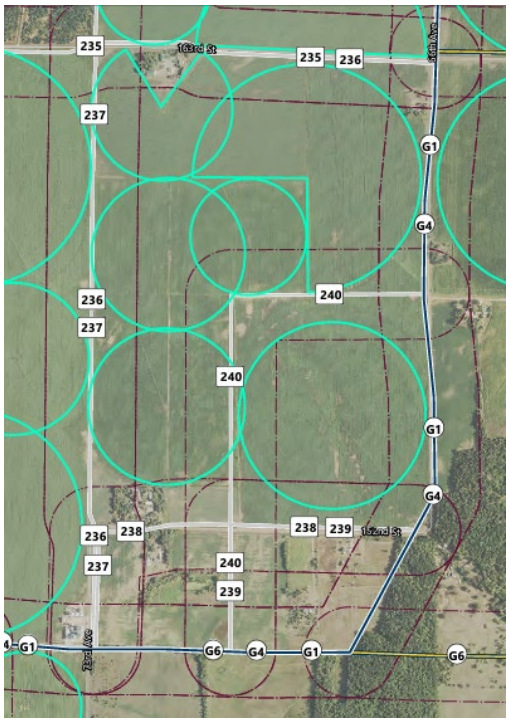
[37] Comment by Camille Snobl at 1 (Nov. 25, 2024) (eDocket No. 202411-212390-01).

[38] Comment by Julie Volstad (Nov. 7, 2024) (eDocket No. 202411-211696-01); Comment by Thomas Oftedahl (Nov. 26, 2024) (eDocket No. 202411-212462-01); Comment by Kevin Sharkey (Nov. 12, 2024) (eDocket No. 202411-211805-01).

[39] Ex. Xcel-19 at Schedule 2 (Langan Surrebuttal).

Figure 12 Residences

Figure 13 Center Pivot Irrigation Systems



As shown on Figure 13, routing in this area is significantly constrained due to many center pivot irrigation systems in close proximity to one another. Prudent routing avoids center pivot irrigation systems where practicable to avoid impacts to agricultural

operations. Here, Xcel Energy is concerned that Route Segments 236, 237, and 240 would result in increased impacts to center pivot irrigation systems. Route Segment 238 would result in increased impacts to other residences, and there is insufficient available right-of-way because of residences on both sides of the east-west road. With respect to Route Segment 239, Xcel Energy previously indicated it had no position on this route segment, and that continues to be the case because this route segment appears to have similar impacts as the corresponding section of the Preferred/Blue Route.

e. Route Segment 244

Comments were submitted in support[40] and in opposition to Route Segment 244. Route Segment 244 was proposed by MDNR to reduce natural resource impacts, and Xcel Energy incorporated Route Segment 244 into its Preferred Route. However, landowners who would be crossed by Route Segment 244 provided comments expressed concern about the impacts of that route on their Christmas tree operations. Xcel Energy continues to believe that Route Segment 244 should be included in the Project's route because it compares favorably in terms of natural resource impacts, and Xcel Energy will work with the landowners develop an alignment within the route width in this area that avoids/minimizes impacts to the tree farm.

f. Route Connector 115

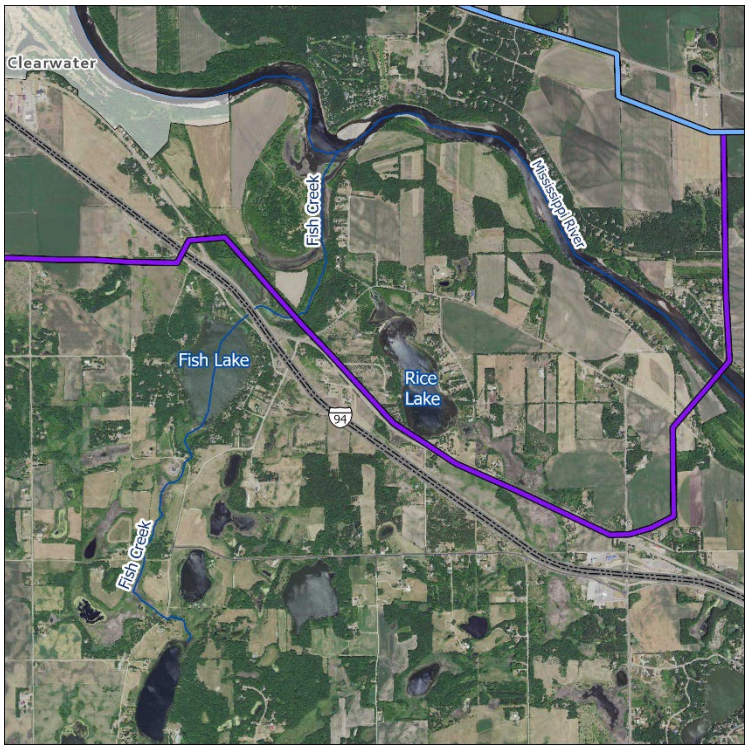
Landowners along Route Connector 115 (including Route Segments 249 and 250) in Region G submitted comments opposing that route, noting in particular increased residential impacts. This route was proposed by MDNR because of natural resources, but Xcel Energy agrees that Route Connector 115 does not avoid or minimize impacts and should not be incorporated into the Preferred Route. Likewise, Xcel Energy does not support moving from the Blue Route to the Purple Route in this region for the reasons discussed elsewhere in these comments.

g. Fish Creek Basin area (Route G3—Purple Route)

Comments were submitted in opposition to the Purple Route in Region G (Route G3) particularly because of potential impacts on the Fish Creek Basin area. Figure 14 below depicts the Purple Route (Route G3) within the Fish Creek and Fish Lake areas.

[40] Comment by Jean Schmidt (Nov. 12, 2024) (eDocket No. 202411-211805-01).

Figure 14



In this region, Xcel Energy believes that the Blue Route (G1) is less impactful than the Purple Route (G3), in part specifically because the Blue Route avoids the Fish Creek basin area.

4. Routing factors.

Members of the public provided comments concerning many of the routing factors the Commission considers under Minn. R. 7850.4100. As applicable, Xcel Energy's responses to those comments are organized by factor below.

a. Human settlement.

In oral and written comments, commenters discussed potential Project impacts in relation to residential proximity, economic impacts (in particular, property values and easement payments), and proximity to development (in particular, the City of Saint Augusta).[41]

[41] *See* Comment by Brian Mies (Nov. 1, 2024) (eDocket No. 202411-211532-01); Comment by Ahren Pfeifle (Nov. 20, 2024) (eDocket No. 202411-212196-01); Comment by Brad Libbesmeier (Nov. 21, 2024) (eDocket No. 202411-212262-01); Comment by Chris Hoye (Nov. 18, 2024) (eDocket No. 202411-212085-01).

With respect to residential proximity, Xcel Energy heard during the route development process that residential proximity was the number one issue for landowners.[42] As such, Xcel Energy developed routes to maximize distances from residences where possible. In particular, in comparison to other end-to-end route options, the Blue and Preferred Routes are within 0-500 feet of the fewest number of residences.

Members of the public also expressed concern about economic impacts as a result of a transmission line easement, particularly related to property values and the structure of an easement payment.[43] Property values are discussed in the DEIS, including in Appendix H (Property Value Supplement).[44] As part of the easement acquisition process, Xcel Energy coordinates closely with landowners regarding their properties and any features of their properties to reach an easement payment. Xcel Energy seeks a perpetual easement for the Project (rather than a term of years, as is typical for wind and solar farms)[45]

Commenters further discussed potential impacts on residential development—particularly regarding the City of Saint Augusta.[46] Xcel Energy's route development process considered residential proximity, and, as discussed elsewhere, the Preferred Route minimizes impacts on residences as compared to other routes studied in the DEIS. Although the Preferred Route does cross the City of Saint Augusta, it generally avoids residential areas within Saint Augusta and parallels parcel boundaries and field edges to the extent practicable. The main population center of Saint Augusta is about 1.5 miles north of the Preferred Route. Further, Xcel Energy is aware of plans for residential development near the City of Saint Augusta and designed the Preferred Route's alignment to avoid the residential development.

b. Public health & safety.

Commenters provided comments concerning electric and magnetic fields (EMF), stray and induced voltage, internet/radio/GPS interference, potential health concerns, and Xcel Energy's emergency response.[47] Xcel Energy's responses are provided below:

> EMF: EMF is discussed extensively in the Route Permit Application and DEIS. Xcel Energy will comply with all applicable regulations, and impacts due to

[42] Kimball 6:00 p.m. Tr. at 58:20-24 (Oct. 30, 2024).

[43] *See e.g.*, Comment by Dale Macik (Nov. 13, 2024) (eDocket No. 202411-211872-02).

[44] Ex. EERA-12 at 102, 201, 242, 287, 320, 345, 372, 401, and Appendix H (DEIS).

[45] Which may be paid in limited installments under certain circumstances under the Minnesota Power Plant Siting Act.

[46] Comment by Chris Hoye (Nov. 18, 2024) (eDocket No. 202411-212085-01).

[47] *See* Comment by Cheryl and Chris Reeve (Nov. 19, 2024) (eDocket No. 202411-212120-01); Comment by Ronald and Laurie Molitor (Nov. 21, 2024) (eDocket No. 202411-212262-02); Comment by Camille Snobl (Nov. 25, 2024) (eDocket No. 202411-212390-01).

EMF are not anticipated.[48] Further, Section 5.4.2 of the Draft Route Permit identifies an electric field limit.

Stray and induced voltage: Stray and induced voltage are discussed in the Route Permit Application and DEIS, and Xcel Energy provided additional information about the process for addressing issues in its Comments on the DEIS.[49] This topic is also addressed by Section 5.4.1 of the Draft Route Permit.

Internet/radio/GPS interference: Members of the public expressed concern about signal interference, particularly with respect to internet and interference with GPS systems on farming equipment.[50] This topic is discussed in the Route Permit Application and DEIS,[51] and it is also covered by Section 5.4.3 of the Draft Route Permit.

Potential health concerns: Members of the public provided comments regarding potential health impacts, particularly related to EMF.[52] As noted, this topic is discussed in both the Route Permit Application and DEIS, including Appendix J, titled "Electric and Magnetic Fields Supplement."[53]

Emergency response: Comments were submitted regarding Xcel Energy's emergency response procedures. As a public utility that operates critical energy infrastructure, Xcel Energy has detailed emergency response procedures. Xcel Energy has also developed guidance for emergency responders, including an Emergency Responder Awareness Training website.[54]

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[48] For example, Jason Pierskalla submitted comments regarding EMF, including excerpts from a rural electrification guide published by the federal government. The highlighted items in this excerpt are governed by the National Electrical Safety Code, with which the Project will comply. *See* Comment by Jason & Laura Pierskalla (Oct. 28, 2024) (eDocket No. 202410-211355-01); Comment by Jason & Laura Pierskalla (Nov. 4, 2024) (eDocket Nos. 202411-211574-01, 202411-211574-02, 202411-211574-03, 202411-211575-01, 202411-211575-02, 202411-211575-03, 202411-211575-04, 202411-211575-05, 02411-211575-06, 202411-211575-07, 202411-211575-08, 202411-211576-01, 202411-211576-02, 202411-211576-03, 202411-211576-04, 202411-211576-05, and 202411-211576-06).

[49] Xcel Energy Comments on DEIS at 5 (Nov. 25, 2024) (eDocket No. 202411-212383-01).

[50] *See* Comment by Julie Volstad (Nov. 7, 2024) (eDocket No. 202411-211696-01); Comment by Keith Klaverkamp (Nov. 13, 2024) (eDocket No. 202411-211874-01).

[51] Ex. Xcel-2 at 113 (RP Application) and Ex. EERA-12 at 127 (DEIS).

[52] *See* Comment by Cheryl and Chris Reeve (Nov. 19, 2024) (eDocket No. 202411-212120-01); Comment by Ronald and Laurie Molitor (Nov. 21, 2024) (eDocket No. 202411-212262-02); Comment by Camille Snobl (Nov. 25, 2024) (eDocket No. 202411-212390-01).

[53] Ex. Xcel-2 at 121-131 (RP Application) and Ex. EERA-12 at 116-122 (DEIS).

[54] *E.g.*, *Energy Safety for Emergency Responders*, *available at* https://xcelnew.my.salesforce.com/sfc/p/#1U0000011ttV/a/8b000002fG1E/Rt2gQ6Xshw3La5dDthxdFM9aeR0asTX6anBZN5XtsKc; Responding to Utility Emergencies, https://xcel-energy.rtueonline.com/.

c. Land-based economies.

Comments related to land-based economics related to potential impacts to agricultural activities, including: center pivot irrigation systems, aerial spraying, farming within the right-of-way, livestock impacts, compaction, machinery access, and property-specific concerns.[55] Issues related to agricultural activities and potential impacts from the Project are discussed in both the Route Permit Application and the DEIS (including aerial spraying, livestock, and compaction, among other topics).[56] Impacts to livestock are not anticipated, and farming activities will generally be allowed to continue within the right-of-way. Likewise, Xcel Energy developed the Preferred Route to avoid impacts to center pivot irrigation systems, where feasible. Where impacts are unavoidable, Xcel Energy will coordinate with landowners regarding their systems.[57] Further, Xcel Energy will use construction matting where needed to minimize potential impacts.[58] Xcel Energy will also coordinate prior to construction with landowners regarding features specific to their properties. For example, several commenters expressed concern about maintaining existing accesses to their properties,[59] and Xcel Energy will certainly coordinate closely with landowners regarding their property access during further Project design and construction.

d. Archaeological and cultural resources.

Both the Route Permit Application and the DEIS include analysis of previously identified cultural resources in the vicinity of studied routes. In addition, a commenter identified cultural resources near the Purple Route south of the Minnesota River.[60] Mr. Langan's Direct Testimony provided an update on Xcel Energy's coordination with Tribes and the State Historic Preservation Office (SHPO) regarding the Project. As Mr. Langan described, Xcel Energy is implementing cultural resource surveys and will prepare reports documenting the results of those surveys for submittal to SHPO and interested Tribal Nations, among others, including the USACE. If cultural resources or mortuary sites/cemeteries are identified during the Phase I Survey, avoidance will be

[55] *See* Comment by Dann Husteft (Nov. 4, 2024) (eDocket No. 202411-211573-02); Comment by Keith Klaverkamp (Nov. 13, 2024) (eDocket No. 202411-211874-01); Comment by Robert and Debra Klaverkamp (Nov. 13, 2024) (eDocket No. 202411-211871-01).

[56] Ex. Xcel-2 at 60, 85, 133, 135, 159 (RP Application); Ex. EERA-12 at 13, 173, 130, 132, 214, 215 (DEIS).

[57] Ex. Xcel-2 at 9, 54 (RP Application); Ex. EERA-12 at 49-51 (DEIS).

[58] *E.g.*, Ex. EERA-12 at sections 3.4.4.1, 5.6.11.3.2, and 5.9 (DEIS). Use of matting will be site-specific (*i.e.*, matting may not be appropriate on existing accesses) and season-specific (matting generally not used during frozen conditions.

[59] *See* Comment by Duane F. (Nov. 4, 2024) (eDocket No. 202411-211573-02); Comment by Dann Husteft (Nov. 4, 2024) (eDocket No. 202411-211573-02).

[60] Granite Falls 11:00 a.m. Public Hearing Transcript at 52:18-25 (Nov. 6, 2024).

the primary mitigation measure to avoid affecting these resources during construction of the Project. Avoidance of resources may include minor adjustments to the Project design and designation of sensitive areas to be left undisturbed or spanned by the Project. Xcel Energy will develop an Unanticipated Discoveries Plan for use during construction of the Project that outlines the procedures to be followed in the event unanticipated archaeological materials are found.[61]

e. Natural environment.

Members of the public provided comments concerning the Project's river crossings; wetlands; vegetation clearing; and avian species.[62] These topics are generally addressed in the Route Permit Application and the DEIS.[63] Both documents describe potential impacts to these resources, as well as ways that such impacts can be avoided and minimized. In general, impacts are avoided or minimized through prudent routing, as well as implementing certain best management practices. Comments were also provided expressing concern over potential impacts on bees. Prior research conducted on this topic found no indication of negative impacts on bees. Rather, bees can benefit from high-voltage transmission line right-of-way; one study found that rights-of-way can serve as corridors allowing pollinators to disperse between fragmented habitats and forage through the landscape.[64]

f. Rare & unique natural resources.

Members of the public provided comments concerning potential impacts of the Project on bald eagles.[65] Bald eagles are protected by the Bald and Golden Eagle Protection Act, and Xcel Energy will be required to comply with applicable USFWS requirements, including restrictions related to tree-clearing in proximity to existing bald eagle nests. Further, Xcel Energy designs its transmission line facilities to comply according to Avian Power Line Interaction Committee recommended guidance.[66]

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[61] Ex. Xcel-16 at 21-22 (Langan Direct).

[62] *See* Comment by Charise Ahrenholz (Nov. 4, 2024) (eDocket No. 202411-211573-02); Comment by Jean Schmidt (Nov. 12, 2024) (eDocket No. 202411-211805-01); Comment by Betsy Nordgaard and Cody Buer (Oct. 21, 2024) (eDocket No. 202410-211141-01).

[63] Ex. Xcel-2 at 36-46, 179, 192, 201 (RP Application); Ex. EERA-12 at 14, 133, 189-191, 243 (DEIS).

[64] *In the Matter of the Application of Great River Energy for a Route Permit for the Reroute of the 115-kV Cedar Lake Transmission Line Project in Scott and Rice Counties*, MPUC Docket No. ET2/TL-23-170, Environmental Assessment at 98 (Dec. 28, 2023).

[65] *See* Comment by Brian Mies (Nov. 1, 2024) (eDocket No. 202411-211532-01); Comment by Betsy Nordgaard and Cody Buer (Oct. 21, 2024) (eDocket No. 202410-211141-01); Comment by Angela Sauer (Nov. 12, 2024) (eDocket No. 202411-211805-01).

[66] Ex. EERA-12 at 190 (DEIS).

g. Existing rights-of-way and boundaries.

Some members of the public provided comments supporting following existing transmission line or road rights-of-way.[67] However, other members of the public also commented on the potential to increase Project impacts by following existing rights-of-way. For example, while some members of the public expressed support for paralleling the existing CapX line where possible, other landowners crossed by CapX opposed another transmission line right-of-way in the same area.[68] Consistent with Minnesota's routing criteria, when developing Project routes, Xcel Energy did seek to follow existing rights-of-way, division, and property lines where feasible. Xcel Energy also heard from the public that doing so would increase, rather than reduce, impacts in some locations. Here, the Preferred Route both follows existing infrastructure right-of-way or parcel, section, or division lines for approximately 91 percent of its length *and* generally minimizes residential impacts as compared to other route options.

h. Reliability.

During the public hearings, some commenters expressed concern over Project reliability, including the reliability of renewable generation.[69] As discussed in Section A(1) above, the Company engages in robust planning and analysis related to its system to ensure that it continues to provide reliable service. Reliability will be further supported by the proposed Lyon County Generating Station, as discussed above.

As discussed in Xcel Energy comments on the DEIS, transmission line circuits that cross over one another present operational and maintenance challenges that also pose reliability challenges. Most significantly, there is a greater risk that the outage of one line can result in an outage of the second line at the same time, reducing system resiliency. It can also result in structural damage to both transmission lines – complicating and increasing restoration times. New crossings also create safety risks because under normal operating conditions, one line may need to remain energized while maintenance work is occurring on the other transmission line at the same location. Taking multiple circuits out of service can stress the remaining system components and lead to overloads and voltage issues, and potentially stability concerns should there be a contingency (loss of) another system element at the same time. Because of these safety and reliability issues, good utility practice is to minimize new

[67] *See* Comment by Paul & Teresa Marxen (Nov. 18, 2024) (eDocket No. 202411-212085-01); Comment by Ahren Pfeifle (Nov. 20, 2024) (eDocket No. 202411-212196-01).

[68] *See* Comment by Ron and Deb Schabel (Nov. 25, 2024) (eDocket No. 202411-212380-01); Comment by Kevin Sharkey (Nov. 12, 2024) (eDocket No. 202411-211805-01).

[69] *See e.g.*, Olivia 6:00 p.m. Public Hearing Transcript at 59:19-24 (Nov. 6, 2024); Comment by Angela Sauer (Nov. 12, 2024) (eDocket No. 202411-211805-01).

line crossings when routing new high voltage transmission lines.[70] Enhancing reliability is particularly critical for the Project because it will be a radial line that is anticipated to support more than 2,000 MW of wind and 420 MW of firm dispatchable resources.[71] Here, the Preferred Route minimizes line crossings to the extent practicable, with a corresponding increase in reliability benefits. Specifically, for example, the Preferred Route (and the Blue Route) would require 12 crossings of existing lines. The Purple Route would require 23 crossings – nearly twice as many.

i. Costs.

Members of the public generally referred to the cost of the Project.[72] The cost of any route is affected by the length of that route, but also by a number of other factors that can impact design and construction procedures/timelines. These factors include terrain, alignment (straight v. angle/corner), soil conditions, existing transmission crossings, proximity to pipelines and railroads, and areas that may require specialized construction practices or mitigation.[73]

Xcel Energy has estimated the following costs for the route analyzed in the DEIS, as well as the Company's Preferred Route and an end-to-end route based on MDNR's route preferences. Table 3 reflects those cost estimates.[74] Overall, the Preferred Route and Blue Route compare favorably to other routes when considering cost.

Table 3

	Preferred Route	MDNR Route	Blue Route	Purple Route	Route Option C	Route Option D
Total (rounded to nearest million)	$773 million	$802 million	$767 million	$787 million	$815 million	$805 million

[70] Ex. Xcel-18 at 7 (Direct Testimony and Schedule of Jason Standing).

[71] Xcel Energy DEIS Comments at 7 (Nov. 25, 2024) (eDocket No. 202411-212383-01).

[72] *See* Comment by Dale Macik (Nov. 13, 2024) (eDocket No. 202411-211872-02); Comment by Miguel Cabrera and Shannon Cabrera MD (Nov. 25, 2024) (eDocket No. 202411-212348-01).

[73] Xcel Energy described these factors in response to a supplemental information inquiry from EERA. Part, but not all, of that response was included in the DEIS. The full response is included here as Attachment A.

[74] Regarding these cost estimates, see note on Table 2 in Section B(2)(a)(i).

j. Other comments.

Commenters questioned how long the Project would be operational, and one commenter questioned whether a decommissioning plan would be in place for the Project.[75] As stated in Section 5.4 of the Route Permit Application, for accounting purposes, Xcel Energy uses an approximately 60-year service life for its transmission assets. However, practically speaking, high voltage transmission lines are seldom completely retired, and Xcel Energy does not anticipate decommissioning the Project after any certain number of years. In part for this reason, Xcel Energy does not support preparing a decommissioning plan for the Project. Xcel Energy understands that decommissioning plans have been prepared for renewable projects and a non-utility transmission line, but the Commission has not historically required such plans for utility-owned transmission lines—and for good reason. A decommissioning plan would be speculative and not useful for an asset like the Project that does not have a specific service life. Likewise, Xcel Energy is a rate-regulated utility subject to the ongoing jurisdiction of the Commission. Consistent with other utility-owned transmission lines in Minnesota, nothing in the record supports requiring a decommissioning plan for this Project.

5. Draft Route Permit

The Commission filed a sample route permit on January 4, 2024, and a copy was also included as Appendix F to the DEIS (the Draft Route Permit). To date, only MDNR has proposed special conditions for inclusion in the Draft Route Permit, and Xcel Energy provided responses to those comments in Section (B)(2)(a) above. Here, Xcel Energy requests limited revisions and additions to the Draft Route Permit to reflect the Project's construction sequence and schedule. Those revisions are reflected in **Attachment B** and summarized in the Table 4 below (new text underlined).

Table 4

Section	Proposed Revision	Explanation
Throughout	Revisions proposed to reflect Project-specific details.	Xcel Energy provides Project-specific details where available; additional sections will be dependent on route selection.
4	. . . The right-of-way will generally be 150 feet in width. In certain locations, a wider right-of-way may be required due	Xcel Energy proposes this revision to clarify that the right-of-way is generally

[75] *See* Comment by Utley Kronenberg (Nov. 19, 2024) (eDocket No. 202411-212120-01).

Section	Proposed Revision	Explanation
	to site-specific conditions and/or specialty structures. . . .	anticipated to be 150 feet wide, but may be wider in site-specific locations (including Mississippi River crossing).
5	. . . The Permittee may, but is not required to, submit any compliance filings required under this route permit immediately after the Commission's oral decision regarding the route permit and prior to the Commission's written decision.	Xcel Energy proposes this additional language to clarify that compliance filings may be submitted after the Commission's oral decision and before a written decision, consistent with new statutory language that will be codified at Minn. Stat. 216I.05, subd. 12(e).[76]
5.3.1	. . . The Permittee need only provide the field representative's contact information to those landowners that are the subject of the Permittee's vegetation clearing or plan and profile submission, and additional landowners may be notified separately when the Permittee is ready to proceed with vegetation clearing or plan and profile filings for other Transmission Facility areas. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, local government units and other interested persons. The Permittee shall file with the Commission an affidavit of distribution of its field representative's contact information at	Xcel Energy proposes the additional text to clarify that distribution of the contact information may occur in phases to coincide with construction of the Project. Xcel Energy proposes the second revision (regarding timing of submission) to accommodate the timing requirements of this condition.[77]

[76] "Immediately following the commission's vote granting an applicant a site or route permit, and prior to issuance of a written commission order embodying the decision, the applicant may submit to commission staff for review preconstruction compliance filings specifying details of the applicant's proposed site or route operations."

[77] This request is consistent with requests in other recent dockets. *See In the Matter of the Application of Great River Energy for a Route Permit for the 115-kV Pilot Knob to Burnsville Rebuild and Upgrade Project in Dakota County, Minnesota*, Findings of Fact, Conclusions of Law, and Recommendations at Findings 189-190 (Oct. 24, 2024).

Section	Proposed Revision	Explanation
	least ~~14~~five days prior to the pre-construction meeting and upon changes to the field representative	
5.3.11	. . . The Permittee shall provide notice of pesticide application to landowners and beekeepers operating Minnesota Department of Agriculture registered apiaries within three miles of the pesticide application area at least 14 days prior to such application. The Permittee shall use the Minnesota Department of Agriculture's Apiary Registry (https://mn.beecheck.org/map) to identify apiaries for purposes of compliance with this condition. . . .	Xcel Energy requests this revision to clarify the data source for identifying apiaries.[78]
6.1 (new)	New section: "If the Permittee will clear vegetation for any portion of the Transmission Facility prior to completion of the design necessary to provide a plan and profile contemplated under Section 9, the Permittee shall file with the Commission at least 14 days prior to such vegetation clearing activities: • If applicable, any vegetation management plan that is applicable to any portion of the Transmission Facility being proposed for vegetation clearing; • A map showing the area proposed for vegetation removal and its location within the Designated	Because of seasonal vegetation clearing restrictions that may be in place that could pose significant schedule constraints for the Project's construction, Xcel Energy proposes this condition in the event it is necessary to commence vegetation clearing prior to a Plan and Profile filing under Section 9.2.[79]

[78] This request is consistent with requests in other recent dockets. *See In the Matter of the Application of Great River Energy and Minnesota Power for a Certificate of Need and Route Permit for an Approximately 180-mile, Double Circuit 345-kV Transmission Line in Itasca, Aitkin, Crow Wing, Morrison, Benton, and Sherburne Counties*, MPUC Docket No. E015, ET2/TL-22-415, CN-22-416, Minnesota Power and Great River Energy Exceptions to ALJ Report at ATTACHMENT C-1, Page 14 and ATTACHMENT C-2, Page 15 (Nov. 25, 2024).

[79] This request is consistent with requests in other recent dockets. *See In the Matter of the Application of Great River Energy for a Route Permit for the 115-kV Pilot Knob to Burnsville Rebuild and Upgrade Project in Dakota County, Minnesota*, MPUC Docket No. ET2/TL-23-410, Findings of Fact, Conclusions of Law, and Recommendations at Findings 206-207 (Oct. 24, 2024).

Section	Proposed Revision	Explanation
	Route and compared to the right-of-way identified in this route permit; • A statement of confirmation that the Permittee has obtained, or will obtain before commencing, necessary land rights and agency permits for the proposed vegetation removal; • The Permittee's plan for notification of field representative for landowners in the identified area; and • If the Permittee has made any modifications to the right-of-way or alignment within the Designated Route from that identified in this route permit, the Permittee shall demonstrate that the right-of-way to be cleared of vegetation will be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit."	
6.2 (new)	New section: "Notwithstanding any other requirements in this Permit, Permittee may commence construction of the substations identified in Section 2.3 of this Permit, provided that Permittee complies, as applicable, with Sections 9.1 and 9.2 of this Permit with respect to the specific scope of the construction activities sought to be conducted by Permittee."	Xcel Energy requests this new Section 6.2 for the same reasons discussed above with respect to Section 6.1, in acknowledgement that seasonal vegetation clearing requirements or other factors may require substation construction to commence prior to other portions of the Project to maintain the Project schedule.

Section	Proposed Revision	Explanation
9.1	. . . Multiple preconstruction meetings and submissions under Section 9.2 are allowed. . . .	Xcel Energy proposes this revision to clarify that, particularly given the scope of this Project, multiple pre-construction meetings may be held. The existing language does not prohibit multiple such meetings, and Xcel Energy proposes this language for clarity only.
9.2	. . . If the Commission does not notify the Permittee in writing within 30 days after the preconstruction meeting that the Commission finds that the planned construction is not consistent with this route permit, the Permittee may commence construction. . . .	Xcel Energy proposes this addition to clarify that, if no response is received from the Commission, construction may proceed. Xcel Energy believes that this is the intent and best reading of the current language and proposes this addition solely for the purposes of clarity.

To the extent that additional special conditions (or revisions to standard permit conditions) are proposed late in this proceeding, Xcel Energy requests an opportunity to specifically respond. Xcel Energy further requests that any additional conditions be subject to the same compliance filing timeframes as the existing permit conditions. For example, to the extent a vegetation management plan is required, it should be required to be filed with the Plan and Profile under Section 9.2 of the Draft Route Permit (not earlier). Relatedly, for purposes of clarity, to the extent a vegetation management plan is required as a special condition, Xcel Energy notes that, consistent with Section 6 of the Draft Route Permit, that special condition would control over the more general Section 5.3.10 regarding vegetation removal.

CONCLUSION

Xcel Energy appreciates the opportunity to submit these comments, as well as the engagement of the public and agencies concerning the Project. The record in this proceeding is robust, and Xcel Energy respectfully submits that the record supports the issuance of a Certificate of Need for the Project and a Route Permit for the Preferred Route.

Dated: December 13, 2024

Northern States Power Company

Attachment A
Supplemental Information Inquiry #2

To: Matt Langan
Xcel Energy

Sent via email to matthew.a.langan@xcelenergy.com

From: Andrew Levi
Energy Environmental Review and Analysis

Date: June 14, 2024

Project: MN Energy Connection Project
22-131/132

Respond: Questions 1-4 August 31
Questions 5-7 July 1

Please respond to the following questions or provide the requested data or information. Staff will use the information provided to develop the environmental document for the project, which is a public document. Your response, in its entirety, will be included in the environmental document as an appendix; therefore, **responses will be publicly available** unless otherwise designated by the respondent as "nonpublic information" pursuant to Minnesota Statute § 13.02, subdivision 12.

Directions: Responses to questions should be contained within this form to the greatest extent possible (11-point Calibri, plain text font, RGB 192, 0, 0). Attach supporting documentation as necessary. While data and information requests, for example, shapefiles or draft plans, will not be contained within this form, document their submittal using this form as follows: "*Requested information* sent to *whom* by *what means* on *date*." Co-applicants please consolidate your reply into a single response.

Do not eFile your response. Return the completed form, as a PDF, along with necessary supporting documentation, and/or requested data or information to andrew.levi@state.mn.us. Contact me at (651) 539-1840 with questions.

1. Provide a narrative explanation of the primary factors that have the most significant impact on costs to construct the HVTL (e.g., length, angle structures, wetlands). As part of your response, indicate whether additional structures would be needed in wetlands for the below regional route segments.

*Response s*ent to Andrew Levi by email on August 29, 2024.

   a. **Terrain –** topographic changes along a route can impact transmission structure spacing and height which can impact transmission costs. Structure spacing may be closer in locations where there is varied relief in terrain and may result in taller structures. Increasing the number of structures and structure heights increase costs due to the number and size of foundations, the amount of steel in a structure (bigger structures require more steel) and the tooling needed to construct the transmission line (e.g. heavier towers may require larger equipment such as cranes used to set towers) and potentially require larger work areas (e.g. matting and restoration) used to complete construction activities.

   b. **Alignment –** the alignment of a transmission line can have an impact on transmission construction costs. Linear alignments are more economical to construct. Introduction of angles

and corner structures have additional costs. Typically angle structures require more steel and larger foundations than tangent structures. Angles and corner structures on double-circuit 345kV transmission lines can also require two separate foundations and structures, double the cost of a single tangent structure.

c. **Soil Conditions –** the type of soil can impact the size of a foundation or potential for specialty foundations needed to support the transmission structures. Poor soils may require larger or deeper foundations which results in additional reinforcing steel (rebar) and concrete volume or may require a pile cap foundation. Rock near the surface also can lead to changes in the foundation type. If the rock is competent, the foundation material may be lessened as the foundation will be attached to the rock. If the rock is fractured, additional labor and equipment may be required for excavation.

d. **Micro-routing to avoid specific features–** site specific routing modifications to avoid specific human or environmental features can also have an impact to transmission costs. For example, modifications to alignments where the transmission line crosses roadways or deflects around a sensitive environmental area adds to the costs due to additional structures and foundations. Spans lengths may be shortened and require additional structures to meet the requirements.

e. **Existing Transmission Crossings –** crossing of existing transmission lines can impact the number of transmission structures and height required for a crossing. Each line crossing needs to be reviewed to ensure safe operations of the existing and new transmission line. Typically, high voltage lines cross over lower voltages and crossing geometry will need to be coordinated between utility companies. The crossing may require structures to be taller to cross over or shorter to cross under. In addition, a vertical or horizontal configured crossing may also impact the cost of the crossing because it could require additional structures, foundation and increased construction costs.

f. **Pipeline & Railroads –** construction of high voltage transmission lines in close proximity to pipelines or railroads may require AC induction mitigation. The cost of mitigation will be dependent on the amount of AC induction and acceptable mitigation measures by the pipeline company or railroad. Detailed mitigation studies will be completed where transmission lines are within a quarter mile of any railroads or pipelines.

g. **Distribution Line Relocation –** If a transmission line is routed in the same location as an existing electric distribution line, the distribution line may need to be relocated so it does not interfere with the operation and maintenance of the new transmission line. The transmission line developer works with the distribution line owner and assumes the cost to move or bury the distribution line.

h. **Material Pricing –** market fluctuations in material pricing can have a substantial impact to the cost of transmission projects. Increases in metal costs has a direct impact on the cost of steel structures and conductor. Additionally, where the material is procured (i.e. domestic or foreign) can also be impacted by the tariffs imposed.

i. **Right of Way –** Changes in land values between project proposal and easement acquisition and the number of voluntary easements will affect Project costs.

j. **Specialized construction practices & mitigation** – areas which require specialized construction or avoidance/minimization measures can also increase costs to the extent they require additional equipment, etc. (e.g. matting).

k. **Length** – The overall length of a transmission line can impact the overall cost. However, a longer, straight transmission line using single, tangent structures can be less expensive than a shorter line that includes double angle structures, poor soils, and other cost escalating features described above

	Count of NWI crossings that exceed 1,000 feet	Response: Structures in wetlands per segment
Regional Segment A4	1	1
Regional Segment B1-Purple	1	1
Regional Segment B3	1	1
Regional Segment B4-Blue	4	11
Regional Segment C2	2	2
Regional Segment E2-Blue	1	2
Regional Segment G1-Blue	1	1
Regional Segment G2	1	1
Regional Segment G3-Purple	2	4
Regional Segment G4	2	4
Regional Segment G5	2	6
Regional Segment G6	1	2

2. Provide costs for the following regional segments:

   a. Regional Segments A1 through A7
   b. Regional Segments B1 through B4
   c. Regional Segments C1 through C4
   d. Regional Segments D1 through D7
   e. Regional Segments E1 and E2
   f. Regional Segments F1 through F8
   g. Regional Segments G1 through G6

Requested information sent to Andrew Levi via email on August 29, 2024.

3. Provide costs for the following refinements and their equivalents.

   a. 211
   b. 219
   c. 213
   d. 215

e. 220
f. 217
g. 218
h. 221
i. 231
j. 235 – 240
k. 242
l. 249 and 250
m. 244
n. 245
o. 246
p. 243

Requested information sent to Andrew Levi via email on August 29, 2024.

4. Provide costs for route connectors 105, 107, and 108.

Requested information sent to Andrew Levi via email on August 29, 2024.

5. The Route Permit Application indicates the Purple Route follows 3.2 miles of existing underground pipeline, the Blue Route follows 2.8 miles of underground existing pipeline, and the routes collectively cross pipeline ROWs in multiple places. The data source is noted as the National Pipeline Mapping System. Please provide the shapefiles of the pipeline ROWs as you mapped them to identify the parallel ROWs and crossing locations.

Requested information sent to Andrew Levi via email on July 1, 2024.

6. Provide the original images provided in the Route Permit Application as Figure 2.4-1 Photos of Typical 345 kV Structures. Please also provide an image of a triple dead-end structure.

Figure 2.4-1 Photos of Typical 345 kV Structures

Typical Double Circuit Structures | Typical Dead-end Structures

7. Provide the parcel shapefile the company is using.

Requested information sent to Andrew Levi via email on July 1, 2024.

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR
MINNESOTA ENERGY CONNECTION PROJECT~~[PROJECT NAME]~~

A HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
[COUNTY]

ISSUED TO ~~[PERMITTEE]~~
NORTHERN STATES POWER COMPANY
DOING BUSINESS AS XCEL ENERGY

PUC DOCKET NO. ~~[Docket Number]~~E-002/TL-22-132

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

NORTHERN STATES POWER COMPANY DOING BUSINESS AS XCEL ENERGY~~[PERMITTEE]~~

~~[Permittee]~~ Northern States Power Company doing business as Xcel Energy is authorized by this route permit to construct and operate ~~[Provide a description of the project authorized by the Minnesota Public Utilities Commission]~~approximately 175 miles of 345 kilovolt double-circuit high-voltage transmission lines and associated facilities, including the Garvin Substation, Intermediate Substation, Voltage Support Substation, and existing substation modifications.

The high-voltage transmission line and associated facilities shall be built within the route identified in this route permit and as portrayed on the route maps and in compliance with the conditions specified in this route permit.

Approved and adopted this ____ day of [Month, Year]

BY ORDER OF THE COMMISSION

_____
Will Seuffert,
Executive Secretary

Attachment B

To request this document in another format such as large print or audio, call 651-296-0406 or 800-657-3782 (voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

CONTENTS

ATTACHMENTS

1 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to ~~[Permittee Name]~~Northern States Power Company doing business as Xcel Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This route permit authorizes the Permittee to construct and operate a ~~[Provide a description of the project as authorized by the Commission]~~345-kilovolt (kV) double-circuit transmission line and associated facilities, and as identified in the attached route maps, hereby incorporated into this document (~~[Project Name]~~Minnesota Energy Connection Project, henceforth known as Transmission Facility).

1.1 Pre-emption

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole route approval required for construction of the transmission facilities and this route permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose governments.

2 TRANSMISSION FACILITY DESCRIPTION

[Provide a description of the Transmission Facility as authorized by the Commission]

The Transmission Facility is located in the following:

County	Township Name	Township	Range	Section

2.1 Structures

~~[Provide a detailed description of the structures authorized by the Commission]~~ The structures will typically range in height from approximately 90- to 160-feet tall; where existing transmission lines are crossed, structure heights could be up to 195 feet tall. The typical spans between structures will be about 1,000 feet. The structures will typically be installed on a drilled pier concrete foundation usually approximately 30 to 40 feet in depth. Specialty structure and/or foundations may be required due to site-specific conditions.

2.2 Conductors

~~[Provide a de~~ Each 345 kV line will utilize bundled (twisted pair) 2x636 kcmil Aluminum Conductor Steel Reinforced or similar performance conductor. These double bundled conductors will have a capacity equal to or greater than 3,000 amps. ~~tailed description of the conductors authorized by the Commission]~~

The table below details specifics on the ~~various~~typical structure ~~and conductor~~ types as presented in the route permit application. Structure dimensions may change based on site conditions.

Line Type	Structure		Foundation Diameter (feet)	Structure Height (feet)	Typical Span between Structures (feet)
	Type	Material			
345 kV double-circuit tangent, small and medium angles	Monopole with davit arms	Weathering steel	7-10	90-160	1,000
345 kV double-circuit large angle and dead-end	Two-poles with davit arms	Weathering steel	Up to 12	9-160	1,000

2.3 Substations and Associated Facilities

~~[Provide a detailed description of the associated facilities and substations as authorized by the Commission]~~To accommodate this Project, the Sherco Solar West Substation will require expansion entirely on Xcel Energy property and installation of new substation equipment such as: breakers, switches, continuously variable transmissions (CVTs), arresters, and bus work. The Project will connect the Sherco Solar West Substation and the Sherco Substation. Modifications at the Sherco Substation will also be necessary to accommodate termination of the second circuit between Sherco and Sherco Solar West Substations as part of this Project.

A new 345 kV Voltage Support Substation will be constructed approximately 80 miles south of the Sherco Solar West Substation. This substation is currently proposed to include a Series Capacitor and one 150 megavolt amp of reactive power (MVAR) static synchronous compensator (STATCOM) system per line. Selection of voltage support equipment will be dependent on the technologies available at the time of construction and the resources selected to interconnect to the line. A control building and road access will also be constructed at the site. The Voltage Support Substation footprint will be approximately 30 acres in size.

An Intermediate Substation will be constructed approximately 20 miles north of the new Garvin Substation. The Intermediate Substation will occupy an approximately 20-acre footprint and facilitate the interconnection of renewable resources to that substation. A control building and road access will also be constructed at the site.

The new Garvin Substation will be approximately 40 acres in size and include the installation of two 116/-58 MVAR synchronous condensers, shunt reactors, breakers, switches, CVTs, arresters, and bus work. A control building and road access will also be constructed at the site.

3 DESIGNATED ROUTE

The route designated by the Commission is described below and shown on the route maps attached to this route permit (Designated Route). The Designated Route is generally described as follows:

[Provide detailed description of the authorized route including the route widths and any other specifics relevant to each segment. Also include a reference to the relevant route map to be attached to the route permit.]

The Designed Route includes an anticipated alignment and a right-of-way. The right-of-way is the physical land needed for the safe operation of the transmission line. The Permittee shall locate the alignment and associated right-of-way within the Designated Route unless otherwise authorized by this route permit or the Commission. The Designated Route provides the Permittee with flexibility for minor adjustments of the alignment and right-of-way to accommodate landowner requests and unforeseen conditions.

Any modifications to the Designated Route or modifications that would result in right-of-way placement outside the Designated Route shall be specifically reviewed by the Commission in accordance with Minn. R. 7850.4900 and Section 10 of this route permit.

4 RIGHT-OF-WAY

This route permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line. The right-of-way will generally be 150 feet in width. In certain locations, a wider right-of-way may be required due to site-specific conditions and/or specialty structures. ~~up to [number] feet in width.~~ The permanent right-of-way is typically 75 ~~[number]~~ feet on both sides of the transmission line measured from its centerline or alignment.

The anticipated alignment is intended to minimize potential impacts relative to the criteria identified in Minn. R. 7850.4100. The final alignment must generally conform to the anticipated alignment identified on the route maps unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this route permit.

Any right-of-way or alignment modifications within the Designated Route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit, and shall be specifically identified

and documented in and approved as part of the plan and profile submitted pursuant to Section 9.~~1~~2 of this route permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100, and the other requirements of this route permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

5 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the Transmission Facility over the life of this route permit. The Permittee may, but is not required to, submit any compliance filings required under this route permit immediately after the Commission's oral decision regarding the route permit and prior to the Commission's written decision.

5.1 Route Permit Distribution

Within 30 days of issuance of this route permit, the Permittee shall provide all affected landowners with a copy of this route permit and the complaint procedures. An affected landowner is any landowner or designee that is within or adjacent to the Designated Route. In no case shall a landowner receive this route permit and complaint procedures less than five days prior to the start of construction on their property. The Permittee shall also provide a copy of this route permit and the complaint procedures to the applicable regional development commissions, county environmental offices, and city and township clerks. The Permittee shall file with the Commission an affidavit of its route permit and complaint procedures distribution within 30 days of issuance of this route permit.

5.2 Access to Property

The Permittee shall notify landowners prior to entering or conducting maintenance within their property, unless otherwise negotiated with the landowner. The Permittee shall keep records of compliance with this section and provide them upon the request of the Minnesota Department of Commerce (Commerce) or Commission staff.

5.3 Construction and Operation Practices

The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the permitting record for this Transmission Facility unless this route permit establishes a different requirement in which case this route permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this route permit during construction of the Transmission Facility. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative at least 14 days prior to the pre-construction meeting. The Permittee shall provide the field representative's contact information to affected landowners, local government units and other interested persons at least 14 days prior to the pre-construction meeting. The Permittee need only provide the field representative's contact information to those landowners that are the subject of the Permittee's vegetation clearing or plan and profile submission, and additional landowners may be notified separately when the Permittee is ready to proceed with vegetation clearing or plan and profile filings for other Transmission Facility areas. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, local government units and other interested persons. The Permittee shall file with the Commission an affidavit of distribution of its field representative's contact information at least ~~14~~five days prior to the pre-construction meeting and upon changes to the field representative.

5.3.2 Employee Training - Route Permit Terms and Conditions

The Permittee shall train all employees, contractors, and other persons involved in the Transmission Facility construction regarding the terms and conditions of this route permit. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.3 Independent Third-Party Monitoring

Prior to any construction, the Permittee shall propose a scope of work and identify an independent third-party monitor to conduct Project construction monitoring on behalf of the Department of Commerce. The scope of work shall be developed in consultation with and approved by the Department of Commerce. This third-party monitor will report directly to and will be under the control of the Department of Commerce with costs borne by the Permittee. Commerce staff shall keep records of compliance with this section and will ensure that status reports detailing the construction monitoring are filed with the Commission in accordance with scope of work approved by the Department of Commerce.

5.3.4 Public Services, Public Utilities, and Existing Easements

During Transmission Facility construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these shall be temporary, and the Permittee shall restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local entities to determine the most appropriate mitigation measures if not already considered as part of this route permit.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.5 Temporary Workspace

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. The Permittee shall obtain temporary easements outside of the authorized transmission line right-of-way from affected landowners through rental agreements. Temporary easements are not provided for in this route permit.

The Permittee may construct temporary driveways between the roadway and the structures to minimize impact using the shortest route feasible. The Permittee shall use construction mats to minimize impacts on access paths and construction areas. The Permittee shall submit the location of temporary workspaces and driveways with the plan and profile pursuant to Section 9.~~1~~2.

5.3.6 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0010 to 7030.0080. The Permittee shall limit construction and maintenance activities to daytime working hours to the extent practicable.

5.3.7 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Transmission Facility during construction and maintenance.

The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. The Permittee shall place structures at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.8 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency Construction Stormwater Program. If construction of the Transmission Facility disturbs more than one acre of land or is sited in an area designated by the Minnesota Pollution Control Agency as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater Permit from the Minnesota Pollution Control Agency that provides for the development of a Stormwater Pollution Prevention Plan that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the Transmission Facility shall be returned to pre-construction conditions.

5.3.9 Wetlands and Water Resources

The Permittee shall develop wetland impact avoidance measures and implement them during construction of the Transmission Facility. Measures shall include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, the Permittee shall construct in wetland areas during frozen ground conditions where practicable and according to permit requirements by the applicable permitting authority. When construction during winter is not possible, the Permittee shall use wooden or composite mats to protect wetland vegetation.

The Permittee shall contain soil excavated from the wetlands and riparian areas and not place it back into the wetland or riparian area. The Permittee shall access wetlands and riparian areas using the shortest route feasible in order to minimize travel through wetland areas and prevent unnecessary impacts. The Permittee shall not place staging or stringing set up areas within or adjacent to wetlands or water resources, as practicable. The Permittee shall assemble power

pole structures on upland areas before they are brought to the site for installation.

The Permittee shall restore wetland and water resource areas disturbed by construction activities to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

The Permittee shall meet all requirements of the U.S. Army Corps of Engineers, Minnesota Department of Natural Resources, and local units of government.

5.3.10 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

The Permittee shall remove tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission line. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission line or impede construction.

5.3.11 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner at least 14 days prior to pesticide application on their property. The Permittee may not apply any pesticide if the landowner requests that there be no application of pesticides within the landowner's property. The Permittee shall provide notice of pesticide application to landowners and beekeepers operating Minnesota Department of Agriculture registered apiaries within three miles of the pesticide application area at least 14 days prior to such application. The Permittee shall use the Minnesota Department of Agriculture's Apiary Registry (https://mn.beecheck.org/map) to identify apiaries for purposes of compliance with this condition. The Permittee shall keep pesticide communication and application records and provide them upon the request of Commerce or Commission staff.

5.3.12 Invasive Species

The Permittee shall employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by Transmission Facility construction activities.

The Permittee shall develop an Invasive Species Prevention Plan and file it with the Commission at least 14 days prior to the pre-construction meeting. The Permittee shall comply with the most recently filed Invasive Species Prevention Plan.

5.3.13 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.14 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city, or township roads that will be used during the construction phase of the Transmission Facility. Where practical, existing roadways shall be used for all activities associated with construction of the Transmission Facility. Oversize or overweight loads associated with the Transmission Facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the fewest number of site access roads required. Access roads shall not be constructed across streams and drainage ways without the required permits and approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when accessing construction workspace, unless otherwise negotiated with the affected landowner.

5.3.15 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to archaeological and historic resources when constructing the Transmission Facility. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must

include an effort to minimize Transmission Facility impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, the Permittee shall train workers about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. The Permittee shall not resume construction at such location until authorized by local law enforcement or the State Archaeologist. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.16 Avian Protection

The Permittee in cooperation with the Minnesota Department of Natural Resources shall identify areas of the transmission line where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices. The Permittee shall submit documentation of its avian protection coordination with the plan and profile pursuant to Section 9.2~~1~~.

5.3.17 Restoration

The Permittee shall restore the right-of-way, temporary workspaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the Transmission Facility. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall file with the Commission a Notification of Restoration Completion.

5.3.18 Cleanup

The Permittee shall remove and properly dispose of all waste and scrap from the right-of-way and all premises on which construction activities were conducted upon completion of each task. The Permittee shall remove and properly dispose of all personal litter, including bottles, cans, and paper from construction activities on a daily basis.

5.3.19 Pollution and Hazardous Wastes

The Permittee shall take all appropriate precautions to protect against pollution of the

environment. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.3.20 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.4 Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.4.2 Electric Field

The Permittee shall design, construct, and operate the transmission line in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the Transmission Facility, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the Transmission Facility. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.5 Other Requirements

5.5.1 Safety Codes and Design Requirements

The Permittee shall design the transmission line and associated facilities to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.5.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the Transmission Facility and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. The Permittee shall submit a copy of such permits upon the request of Commerce or Commission staff.

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission an Other Permits and Regulations Submittal that contains a detailed status of all permits, authorizations, and approvals that have been applied for specific to the Transmission Facility. The Other Permits and Regulations Submittal shall also include the permitting agency or authority, the name of the permit, authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

6 SPECIAL CONDITIONS

The special conditions shall take precedence over other conditions of this permit should there be a conflict.

~~[Add Special Conditions in accordance with the record of the docket]~~**6.1 Vegetation Clearing Before Construction**

If the Permittee will clear vegetation for any portion of the Transmission Facility prior to completion of the design necessary to provide a plan and profile contemplated under Section 9, the Permittee shall file with the Commission at least 14 days prior to such vegetation clearing activities:

- If applicable, any vegetation management plan that is applicable to any portion of the Transmission Facility being proposed for vegetation clearing;

- A map showing the area proposed for vegetation removal and its location within the Designated Route and compared to the right-of-way identified in this route permit;
- A statement of confirmation that the Permittee has obtained, or will obtain before commencing, necessary land rights and agency permits for the proposed vegetation removal;
- The Permittee's plan for notification of field representative for landowners in the identified area; and
- If the Permittee has made any modifications to the right-of-way or alignment within the Designated Route from that identified in this route permit, the Permittee shall demonstrate that the right-of-way to be cleared of vegetation will be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit.

If the Commission does not notify the Permittee in writing within 14 days after the filing described above that the Commission finds that the filing is not consistent with this route permit, the Permittee may commence vegetation clearing as described in the filing.

6.2 Substation Construction

Notwithstanding any other requirements in this Permit, Permittee may commence construction of the substations identified in Section 2.3 of this Permit, provided that Permittee complies, as applicable, with Sections 9.1 and 9.2 of this Permit with respect to the specific scope of the construction activities sought to be conducted by Permittee.

7 DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this route permit the Permittee shall file a Failure to Construct Report and the Commission shall consider suspension of this route permit in accordance with Minn. R. 7850.4700.

8 COMPLAINT PROCEDURES

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission the complaint procedures that will be used to receive and respond to complaints. The complaint procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this route permit.

Upon request, the Permittee shall assist Commerce or Commission staff with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this route permit is a failure to comply with the conditions of this route permit. Compliance filings must be electronically filed with the Commission.

9.1 Pre-Construction Meeting

Prior to the start of construction, the Permittee shall participate in a pre-construction meeting with Commerce and Commission staff to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. Multiple pre-construction meetings and submissions under Section 9.2 are allowed. Within 14 days following the pre-construction meeting, the Permittee shall file with the Commission a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the anticipated construction start date.

9.2 Plan and Profile

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission, and provide the Department of Commerce, and the counties where the Transmission Facility, or portion of the Transmission Facility, will be constructed with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the Transmission Facility. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this route permit.

The Permittee may not commence construction until the earlier of (i) 30 days after the pre-construction meeting or (ii) or until the Commission staff has notified the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this route permit.

If the Commission notifies the Permittee in writing within 30 days after the pre-construction meeting that it has completed its review of the documents and planned construction, and finds that the planned construction is not consistent with this route permit, the Permittee may submit additional and/or revised documentation and may not commence construction until the Commission has notified the Permittee in writing that it has determined that the planned construction is consistent with this route permit. If the Commission does not notify the Permittee in writing within 30 days after the preconstruction meeting that the Commission finds that the planned construction is not consistent with this route permit, the Permittee may commence construction.

If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission, the Department of Commerce, and county staff at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this route permit.

9.3 Status Reports

The Permittee shall file with the Commission monthly Construction Status Reports beginning with the pre-construction meeting and until completion of restoration. Construction Status Reports shall describe construction activities and progress, activities undertaken in compliance with this route permit, and shall include text and photographs.

If the Permittee does not commence construction of the Transmission Facility within six months of this route permit issuance, the Permittee shall file with the Commission Pre-Construction Status Reports on the anticipated timing of construction every six months beginning with the issuance of this route permit until the pre-construction meeting.

9.4 In-Service Date

At least three days before the Transmission Facility is to be placed into service, the Permittee shall notify the Commission of the date on which the Transmission Facility will be placed into service and the date on which construction was completed.

9.5 As-Builts

Within 90 days after completion of construction, the Permittee shall submit to the Commission copies of all final as-built plans and specifications developed during the Transmission Facility construction.

9.6 GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the Transmission Facility and each substation connected.

9.7 Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.
(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.
(c) To sample and monitor upon the facilities easement of the property.
To examine and copy any documents pertaining to compliance with the conditions of this route permit.

10 ROUTE PERMIT AMENDMENT

This route permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this route permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required under Minn. R. 7850.4900.

11 TRANSFER OF ROUTE PERMIT

The Permittee may request at any time that the Commission transfer this route permit to another person or entity (transferee). In its request, the Permittee must provide the Commission with:

(a) the name and description of the transferee;
(b) the reasons for the transfer;
(c) a description of the facilities affected; and
(d) the proposed effective date of the transfer.

The transferee must provide the Commission with a certification that it has read, understands and is able to comply with the plans and procedures filed for the Transmission Facility and all conditions of this route permit. The Commission may authorize transfer of the route permit after affording the Permittee, the transferee, and interested persons such process as is required under Minn. R. 7850.5000.

12 REVOCATION OR SUSPENSION OF ROUTE PERMIT

The Commission may initiate action to revoke or suspend this route permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend this route permit.

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR
MINNESOTA ENERGY CONNECTION PROJECT

A HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
[COUNTY]

ISSUED TO
NORTHERN STATES POWER COMPANY
DOING BUSINESS AS XCEL ENERGY

PUC DOCKET NO. E-002/TL-22-132

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

Northern States Power Company doing business as Xcel Energy

Northern States Power Company doing business as Xcel Energy is authorized by this route permit to construct and operate approximately 175 miles of 345 kilovolt double-circuit high-voltage transmission lines and associated facilities, including the Garvin Substation, Intermediate Substation, Voltage Support Substation, and existing substation modifications.

The high-voltage transmission line and associated facilities shall be built within the route identified in this route permit and as portrayed on the route maps and in compliance with the conditions specified in this route permit.

Approved and adopted this ____ day of [Month, Year]

BY ORDER OF THE COMMISSION

_____

Will Seuffert,
Executive Secretary

(voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

ATTACHMENTS

1 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Northern States Power Company doing business as Xcel Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This route permit authorizes the Permittee to construct and operate a 345-kilovolt (kV) double-circuit transmission line and associated facilities, and as identified in the attached route maps, hereby incorporated into this document (Minnesota Energy Connection Project, henceforth known as Transmission Facility).

1.1 Pre-emption

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole route approval required for construction of the transmission facilities and this route permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose governments.

2 TRANSMISSION FACILITY DESCRIPTION

[Provide a description of the Transmission Facility as authorized by the Commission]

The Transmission Facility is located in the following:

County	Township Name	Township	Range	Section

2.1 Structures

The structures will typically range in height from approximately 90- to 160-feet tall; where existing transmission lines are crossed, structure heights could be up to 195 feet tall. The typical spans between structures will be about 1,000 feet. The structures will typically be installed on a drilled pier concrete foundation usually approximately 30 to 40 feet in depth. Specialty structure and/or foundations may be required due to site-specific conditions.

2.2 Conductors

Each 345 kV line will utilize bundled (twisted pair) 2x636 kcmil Aluminum Conductor Steel Reinforced or similar performance conductor. These double bundled conductors will have a capacity equal to or greater than 3,000 amps.

The table below details specifics on the typical structure types as presented in the route permit application. Structure dimensions may change based on site conditions.

Line Type	Structure		Foundation Diameter (feet)	Structure Height (feet)	Typical Span between Structures (feet)
	Type	Material			
345 kV double-circuit tangent, small and medium angles	Monopole with davit arms	Weathering steel	7-10	90-160	1,000
345 kV double-circuit large angle and dead-end	Two-poles with davit arms	Weathering steel	Up to 12	9-160	1,000

2.3 Substations and Associated Facilities

To accommodate this Project, the Sherco Solar West Substation will require expansion entirely on Xcel Energy property and installation of new substation equipment such as: breakers, switches, continuously variable transmissions (CVTs), arresters, and bus work. The Project will connect the Sherco Solar West Substation and the Sherco Substation. Modifications at the Sherco Substation will also be necessary to accommodate termination of the second circuit between Sherco and Sherco Solar West Substations as part of this Project.

A new 345 kV Voltage Support Substation will be constructed approximately 80 miles south of the Sherco Solar West Substation. This substation is currently proposed to include a Series Capacitor and one 150 megavolt amp of reactive power (MVAR) static synchronous compensator (STATCOM) system per line. Selection of voltage support equipment will be dependent on the technologies available at the time of construction and the resources selected to interconnect to the line. A control building and road access will also be constructed at the site. The Voltage Support Substation footprint will be approximately 30 acres in size.

An Intermediate Substation will be constructed approximately 20 miles north of the new Garvin Substation. The Intermediate Substation will occupy an approximately 20-acre footprint and facilitate the interconnection of renewable resources to that substation. A control building and road access will also be constructed at the site.

The new Garvin Substation will be approximately 40 acres in size and include the installation of two 116/-58 MVAR synchronous condensers, shunt reactors, breakers, switches, CVTs, arresters, and bus work. A control building and road access will also be constructed at the site.

3 DESIGNATED ROUTE

The route designated by the Commission is described below and shown on the route maps

attached to this route permit (Designated Route). The Designated Route is generally described as follows:

[Provide detailed description of the authorized route including the route widths and any other specifics relevant to each segment. Also include a reference to the relevant route map to be attached to the route permit.]

The Designed Route includes an anticipated alignment and a right-of-way. The right-of-way is the physical land needed for the safe operation of the transmission line. The Permittee shall locate the alignment and associated right-of-way within the Designated Route unless otherwise authorized by this route permit or the Commission. The Designated Route provides the Permittee with flexibility for minor adjustments of the alignment and right-of-way to accommodate landowner requests and unforeseen conditions.

Any modifications to the Designated Route or modifications that would result in right-of-way placement outside the Designated Route shall be specifically reviewed by the Commission in accordance with Minn. R. 7850.4900 and Section 10 of this route permit.

4 RIGHT-OF-WAY

This route permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line. The right-of-way will generally be 150 feet in width. In certain locations, a wider right-of-way may be required due to site-specific conditions and/or specialty structures. The permanent right-of-way is typically 75 feet on both sides of the transmission line measured from its centerline or alignment.

The anticipated alignment is intended to minimize potential impacts relative to the criteria identified in Minn. R. 7850.4100. The final alignment must generally conform to the anticipated alignment identified on the route maps unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this route permit.

Any right-of-way or alignment modifications within the Designated Route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit, and shall be specifically identified

and documented in and approved as part of the plan and profile submitted pursuant to Section 9.2 of this route permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100, and the other requirements of this route permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

5 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the Transmission Facility over the life of this route permit. The Permittee may, but is not required to, submit any compliance filings required under this route permit immediately after the Commission's oral decision regarding the route permit and prior to the Commission's written decision.

5.1 Route Permit Distribution

Within 30 days of issuance of this route permit, the Permittee shall provide all affected landowners with a copy of this route permit and the complaint procedures. An affected landowner is any landowner or designee that is within or adjacent to the Designated Route. In no case shall a landowner receive this route permit and complaint procedures less than five days prior to the start of construction on their property. The Permittee shall also provide a copy of this route permit and the complaint procedures to the applicable regional development commissions, county environmental offices, and city and township clerks. The Permittee shall file with the Commission an affidavit of its route permit and complaint procedures distribution within 30 days of issuance of this route permit.

5.2 Access to Property

The Permittee shall notify landowners prior to entering or conducting maintenance within their property, unless otherwise negotiated with the landowner. The Permittee shall keep records of compliance with this section and provide them upon the request of the Minnesota Department of Commerce (Commerce) or Commission staff.

5.3 Construction and Operation Practices

The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the permitting record for this Transmission Facility unless this route permit establishes a different requirement in which case this route permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this route permit during construction of the Transmission Facility. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative at least 14 days prior to the pre-construction meeting. The Permittee shall provide the field representative's contact information to affected landowners, local government units and other interested persons at least 14 days prior to the pre-construction meeting. The Permittee need only provide the field representative's contact information to those landowners that are the subject of the Permittee's vegetation clearing or plan and profile submission, and additional landowners may be notified separately when the Permittee is ready to proceed with vegetation clearing or plan and profile filings for other Transmission Facility areas. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, local government units and other interested persons. The Permittee shall file with the Commission an affidavit of distribution of its field representative's contact information at least five days prior to the pre-construction meeting and upon changes to the field representative.

5.3.2 Employee Training - Route Permit Terms and Conditions

The Permittee shall train all employees, contractors, and other persons involved in the Transmission Facility construction regarding the terms and conditions of this route permit. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.3 Independent Third-Party Monitoring

Prior to any construction, the Permittee shall propose a scope of work and identify an independent third-party monitor to conduct Project construction monitoring on behalf of the Department of Commerce. The scope of work shall be developed in consultation with and approved by the Department of Commerce. This third-party monitor will report directly to and will be under the control of the Department of Commerce with costs borne by the Permittee. Commerce staff shall keep records of compliance with this section and will ensure that status reports detailing the construction monitoring are filed with the Commission in accordance with scope of work approved by the Department of Commerce.

5.3.4 Public Services, Public Utilities, and Existing Easements

During Transmission Facility construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these shall be temporary, and the Permittee shall restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local entities to determine the most appropriate mitigation measures if not already considered as part of this route permit.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.5 Temporary Workspace

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. The Permittee shall obtain temporary easements outside of the authorized transmission line right-of-way from affected landowners through rental agreements. Temporary easements are not provided for in this route permit.

The Permittee may construct temporary driveways between the roadway and the structures to minimize impact using the shortest route feasible. The Permittee shall use construction mats to minimize impacts on access paths and construction areas. The Permittee shall submit the location of temporary workspaces and driveways with the plan and profile pursuant to Section 9.2.

5.3.6 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0010 to 7030.0080. The Permittee shall limit construction and maintenance activities to daytime working hours to the extent practicable.

5.3.7 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Transmission Facility during construction and maintenance.

The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. The Permittee shall place structures at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.8 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency Construction Stormwater Program. If construction of the Transmission Facility disturbs more than one acre of land or is sited in an area designated by the Minnesota Pollution Control Agency as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater Permit from the Minnesota Pollution Control Agency that provides for the development of a Stormwater Pollution Prevention Plan that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the Transmission Facility shall be returned to pre-construction conditions.

5.3.9 Wetlands and Water Resources

The Permittee shall develop wetland impact avoidance measures and implement them during construction of the Transmission Facility. Measures shall include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, the Permittee shall construct in wetland areas during frozen ground conditions where practicable and according to permit requirements by the applicable permitting authority. When construction during winter is not possible, the Permittee shall use wooden or composite mats to protect wetland vegetation.

The Permittee shall contain soil excavated from the wetlands and riparian areas and not place it back into the wetland or riparian area. The Permittee shall access wetlands and riparian areas using the shortest route feasible in order to minimize travel through wetland areas and prevent unnecessary impacts. The Permittee shall not place staging or stringing set up areas within or adjacent to wetlands or water resources, as practicable. The Permittee shall assemble power

pole structures on upland areas before they are brought to the site for installation.

The Permittee shall restore wetland and water resource areas disturbed by construction activities to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

The Permittee shall meet all requirements of the U.S. Army Corps of Engineers, Minnesota Department of Natural Resources, and local units of government.

5.3.10 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

The Permittee shall remove tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission line. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission line or impede construction.

5.3.11 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner at least 14 days prior to pesticide application on their property. The Permittee may not apply any pesticide if the landowner requests that there be no application of pesticides within the landowner's property. The Permittee shall provide notice of pesticide application to landowners and beekeepers operating Minnesota Department of Agriculture registered apiaries within three miles of the pesticide application area at least 14 days prior to such application. The Permittee shall use the Minnesota Department of Agriculture’s Apiary Registry (https://mn.beecheck.org/map) to identify apiaries for purposes of compliance with this condition. The Permittee shall keep pesticide communication and application records and provide them upon the request of Commerce or Commission staff.

5.3.12 Invasive Species

The Permittee shall employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by Transmission Facility construction activities.

The Permittee shall develop an Invasive Species Prevention Plan and file it with the Commission at least 14 days prior to the pre-construction meeting. The Permittee shall comply with the most recently filed Invasive Species Prevention Plan.

5.3.13 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.14 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city, or township roads that will be used during the construction phase of the Transmission Facility. Where practical, existing roadways shall be used for all activities associated with construction of the Transmission Facility. Oversize or overweight loads associated with the Transmission Facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the fewest number of site access roads required. Access roads shall not be constructed across streams and drainage ways without the required permits and approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when accessing construction workspace, unless otherwise negotiated with the affected landowner.

5.3.15 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to archaeological and historic resources when constructing the Transmission Facility. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must

include an effort to minimize Transmission Facility impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, the Permittee shall train workers about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. The Permittee shall not resume construction at such location until authorized by local law enforcement or the State Archaeologist. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.16 Avian Protection

The Permittee in cooperation with the Minnesota Department of Natural Resources shall identify areas of the transmission line where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices. The Permittee shall submit documentation of its avian protection coordination with the plan and profile pursuant to Section 9.2.

5.3.17 Restoration

The Permittee shall restore the right-of-way, temporary workspaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the Transmission Facility. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall file with the Commission a Notification of Restoration Completion.

5.3.18 Cleanup

The Permittee shall remove and properly dispose of all waste and scrap from the right-of-way and all premises on which construction activities were conducted upon completion of each task. The Permittee shall remove and properly dispose of all personal litter, including bottles, cans, and paper from construction activities on a daily basis.

5.3.19 Pollution and Hazardous Wastes

The Permittee shall take all appropriate precautions to protect against pollution of the

environment. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.3.20 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.4 Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.4.2 Electric Field

The Permittee shall design, construct, and operate the transmission line in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the Transmission Facility, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the Transmission Facility. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.5 Other Requirements

5.5.1 Safety Codes and Design Requirements

The Permittee shall design the transmission line and associated facilities to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.5.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the Transmission Facility and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. The Permittee shall submit a copy of such permits upon the request of Commerce or Commission staff.

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission an Other Permits and Regulations Submittal that contains a detailed status of all permits, authorizations, and approvals that have been applied for specific to the Transmission Facility. The Other Permits and Regulations Submittal shall also include the permitting agency or authority, the name of the permit, authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

6 SPECIAL CONDITIONS

The special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1 Vegetation Clearing Before Construction

If the Permittee will clear vegetation for any portion of the Transmission Facility prior to completion of the design necessary to provide a plan and profile contemplated under Section 9, the Permittee shall file with the Commission at least 14 days prior to such vegetation clearing activities:

- If applicable, any vegetation management plan that is applicable to any portion of the Transmission Facility being proposed for vegetation clearing;
- A map showing the area proposed for vegetation removal and its location within the

Designated Route and compared to the right-of-way identified in this route permit;

- A statement of confirmation that the Permittee has obtained, or will obtain before commencing, necessary land rights and agency permits for the proposed vegetation removal;
- The Permittee's plan for notification of field representative for landowners in the identified area; and
- If the Permittee has made any modifications to the right-of-way or alignment within the Designated Route from that identified in this route permit, the Permittee shall demonstrate that the right-of-way to be cleared of vegetation will be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit.

If the Commission does not notify the Permittee in writing within 14 days after the filing described above that the Commission finds that the filing is not consistent with this route permit, the Permittee may commence vegetation clearing as described in the filing.

6.2 Substation Construction

Notwithstanding any other requirements in this Permit, Permittee may commence construction of the substations identified in Section 2.3 of this Permit, provided that Permittee complies, as applicable, with Sections 9.1 and 9.2 of this Permit with respect to the specific scope of the construction activities sought to be conducted by Permittee.

7 DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this route permit the Permittee shall file a Failure to Construct Report and the Commission shall consider suspension of this route permit in accordance with Minn. R. 7850.4700.

8 COMPLAINT PROCEDURES

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission the complaint procedures that will be used to receive and respond to complaints. The complaint procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this route permit.

Upon request, the Permittee shall assist Commerce or Commission staff with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this route permit is a failure to comply with the conditions of this route permit. Compliance filings must be electronically filed with the Commission.

9.1 Pre-Construction Meeting

Prior to the start of construction, the Permittee shall participate in a pre-construction meeting with Commerce and Commission staff to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. Multiple pre-construction meetings and submissions under Section 9.2 are allowed. Within 14 days following the pre-construction meeting, the Permittee shall file with the Commission a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the anticipated construction start date.

9.2 Plan and Profile

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission, and provide the Department of Commerce, and the counties where the Transmission Facility, or portion of the Transmission Facility, will be constructed with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the Transmission Facility. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this route permit.

The Permittee may not commence construction until the earlier of (i) 30 days after the pre-construction meeting or (ii) or until the Commission staff has notified the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this route permit.

If the Commission notifies the Permittee in writing within 30 days after the pre-construction meeting that it has completed its review of the documents and planned construction, and finds that the planned construction is not consistent with this route permit, the Permittee may submit additional and/or revised documentation and may not commence construction until the Commission has notified the Permittee in writing that it has determined that the planned construction is consistent with this route permit. If the Commission does not notify the Permittee in writing within 30 days after the preconstruction meeting that the Commission finds that the planned construction is not consistent with this route permit, the Permittee may commence construction.

If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission, the Department of Commerce, and county staff at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this route permit.

9.3 Status Reports

The Permittee shall file with the Commission monthly Construction Status Reports beginning with the pre-construction meeting and until completion of restoration. Construction Status Reports shall describe construction activities and progress, activities undertaken in compliance with this route permit, and shall include text and photographs.

If the Permittee does not commence construction of the Transmission Facility within six months of this route permit issuance, the Permittee shall file with the Commission Pre-Construction Status Reports on the anticipated timing of construction every six months beginning with the issuance of this route permit until the pre-construction meeting.

9.4 In-Service Date

At least three days before the Transmission Facility is to be placed into service, the Permittee shall notify the Commission of the date on which the Transmission Facility will be placed into service and the date on which construction was completed.

9.5 As-Builts

Within 90 days after completion of construction, the Permittee shall submit to the Commission copies of all final as-built plans and specifications developed during the Transmission Facility construction.

9.6 GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the Transmission Facility and each substation connected.

9.7 Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.
(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.
(c) To sample and monitor upon the facilities easement of the property.
To examine and copy any documents pertaining to compliance with the conditions of this route permit.

10 ROUTE PERMIT AMENDMENT

This route permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this route permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required under Minn. R. 7850.4900.

11 TRANSFER OF ROUTE PERMIT

The Permittee may request at any time that the Commission transfer this route permit to another person or entity (transferee). In its request, the Permittee must provide the Commission with:

(a) the name and description of the transferee;
(b) the reasons for the transfer;
(c) a description of the facilities affected; and
(d) the proposed effective date of the transfer.

The transferee must provide the Commission with a certification that it has read, understands and is able to comply with the plans and procedures filed for the Transmission Facility and all conditions of this route permit. The Commission may authorize transfer of the route permit after affording the Permittee, the transferee, and interested persons such process as is required under Minn. R. 7850.5000.

12 REVOCATION OR SUSPENSION OF ROUTE PERMIT

The Commission may initiate action to revoke or suspend this route permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend this route permit.